THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXIX. NEW YORK, SATURDAY, OCTOBER 26, 1901. No. 17.

ORIGINAL ARTICLES.

GIANT SACROCOCCYGEAL TUMORS. AN ACCOUNT OF ONE WHICH PURSUED AN ATROPHIC COURSE.[1]

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IN October, 1897, there came under my observation, through the courtesy of Dr. P. V. Carlin, a male child of three months who presented an unusual growth in the coccygeal region. The tumor was congenital and at birth was said to have been practically of the proportional size and shape which it was when I saw it and to have presented the same general characteristics. The child was mature at birth, at which time the parents were told that it would probably die. The only attention which the mass received was ordinary cleanliness. The child thrived and at three months of age was quite as strong and as well nourished as babies of that age usually are; it had not been ill.

Examination of the child when first seen revealed a very large growth occupying the sacrococcygeal region, extending laterally to the buttocks and forward in front of the anus. The growth encroached upon the left buttock rather more than upon the right, reaching well to the gluteal fold on the left side. It was irregularly

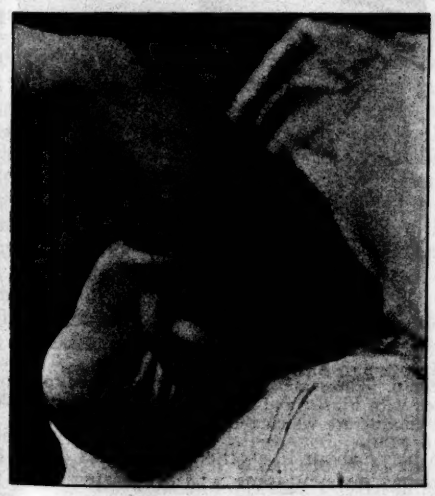

Fig. 1. Congenital sacrococcygeal tumor; child three months old.

ball-shaped; the entire mass was as large as the head of a child six years old. The tumor measured seventeen inches in circumference. The general consistency was soft. Below and in front it was markedly cystic and fluctuating, while above and laterally it was firm and in places nodular. The firmer portion seemed attached to deep structures and these more solid parts were thrown

Fig. 2. The same.

into large irregular folds with deep creases between them. The skin over the tumor was normal above and at the sides, but very thin and of a bluish-red over the cystic parts. Large veins crossed the latter portions. The skin was freely movable over the fluid portion of the tumor, but tightly attached in the crevices above mentioned. The cystic portion swayed with the movements of the child. Palpation of this gave the impression of one or more large cysts and many small ones with here and there firm portions of tissue. Deep palpation failed to reveal a gap in the bony structures. Digital examination of the rectum showed nothing abnormal. The bowels had been regular and the movements natural; there had been no abnormality of micturition. When the child cried the upper lateral parts of the tumor were moved by the gluteal muscles, but the tension of the mass itself was not changed. There was neither paralysis nor anesthesia of the lower extremities. The size, shape and location of the tumor are very well shown in Fig. 1 and Fig. 2.

Removal of the mass was not advised; the tumor was too large and the baby too young. Aspiration of the fluid contents was suggested, but the parents did not take kindly to the thought and it was not urged. The mother was asked to keep it very clean, to wash it with dilute alcohol and dust it with a simple dusting powder, protecting it well with soft clothing. She gave it the best of care.

Three months later the tumor was in about the same condition; there had been no appreciable

[1] Read before the American Surgical Association, 1901.

change. Six months after this, or when the child was about one year old, the fluid portions of the tumor seemed to be less prominent; the tumor itself had rather less of a ball shape, and was beginning to get flat.

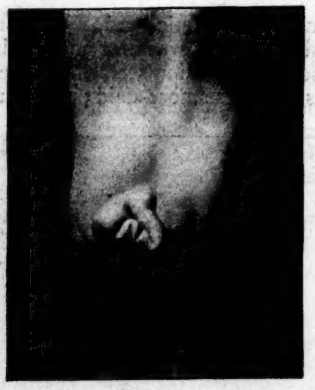

Fig. 3. The same at three and a half years of age.

The child was seen at intervals of two or three months. The tumor underwent progressive contraction; the skin over it never broke; it was never ulcerated. The boy had the usual diseases of childhood, measles, whooping-cough, diphtheria, etc., but his physician said that he came through them all without accident. He waxed strong and hearty. "He is the strongest of my six children," said the mother.

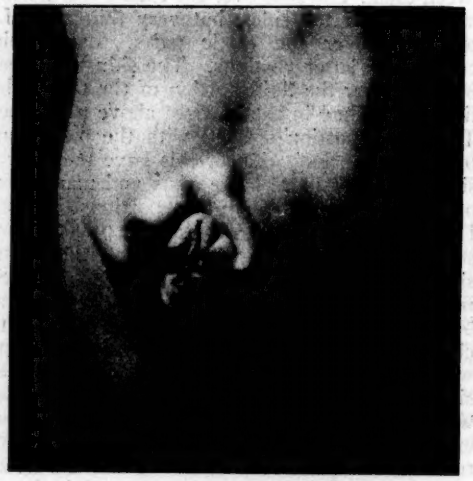

Fig. 4. The same.

Figs. 3, 4, 5 and 6 show the condition in March, 1901, the child then being three years and nine months of age. At this time the tumor was well flattened out, circular in outline, extending to the gluteal fold on the left side, but not quite so far as this on the right side; anteriorly it went to the anal margin in the middle line and in front of the anus on the right side. Above it was limited by the middle of the sacrum. Its diameter was five inches; in size it was somewhat larger than a man's fist, well flattened out. The skin over it seemed rather thick; it was movable in places. Here and there it was thrown into deep folds and at these folds the skin was tightly adherent. At

Fig. 5. The same.

the right extremity a hard nodule an inch and a quarter long and one-half inch wide was plainly felt. This nodule or lump could be bent slightly on itself, it moved freely on the deep parts, but the skin over it was attached. The entire mass was movable. As the child lay on its mother's lap and kicked its legs the upper lateral parts of the tumor moved, the skin over it being thrown into deeper folds. The mass was nowhere tender or inflamed; it seemed to be solid throughout. Rectal examination was negative.

This boy is well developed, strong and healthy.

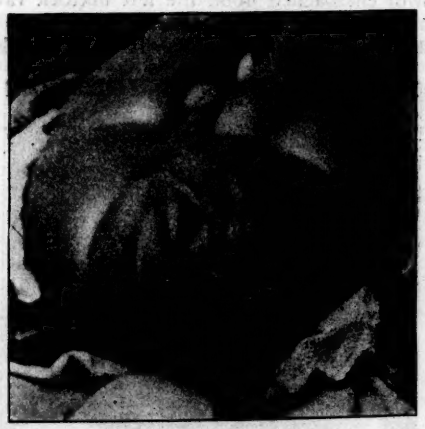

Fig. 6. The same. Figs. 3, 4, 5 and 6 are to be compared with Figs. 1 and 2, in order to show the spontaneous contracture which the tumor has undergone.

He plays about like other youngsters of his age and has no symptoms whatever referable to the lower extremities. He runs about, lies on his back and sits like other children. He does not favor this portion of his body in any way; in a word, except for its mere presence this tumor gives no general or local symptoms. The boy never seems conscious of it.

Some variety of congenital malformation of the sacrococcygeal region is very common. That

most often seen is the simple dimple or groove, the so-called fovea coccygea. Beyond this we have the true epidermoid fistula or pilo-nidal sinus, and a step further brings the true dermoid. In this class also may be placed sacculation of the cord connected with vertebral fissures, spina bifida occulta. All of the foregoing are of single germinal formation. The more complex growths are of double germinal substratum—complete or incomplete double formations, and parasitic cystic mixed tumors (teratomata-embryoid tumors). I believe that the case here related belongs to the last class, and, while it lacks histological confirmation, one may reason by analogy from similar growths which have been pathologically examined.

These sacrococcygeal teratomata present the greatest diversities of tissue. They form a class of tumors by themselves. They are generally mixed, and in addition to the structure of dermoids they may and often do present cysts lined with ciliated, flat or columnar epithelium, muscle fiber, nerve tissue, intestinal remnants, bone and cartilage. Rindfleisch names such a growth a "histological potpourri." The region itself presents as much diversity of structure as does that of the face.

Stolper[1] has recently given the subject careful attention. He approaches it almost entirely from the genetic or histological standpoint. He found that many cases of spina bifida are multilocular and can be told from teratoid tumors only by microscopical study; combination of both forms may occur. Stolper affirms that it has not yet been proven that the remnant of the medullary canal, a persistent coccygeal vertebra, the neuro-enteric duct, or Luschka's gland may be the starting-point of such a growth though the possibility of this is not denied. One thing is certain and that is that teratoid tumors of the sacrococcygeal region unanimously show components from all three of the germinal layers. Variations in the mode of growth are responsible for the great disparity in the microscopic appearances. The manifold coarse and fine structure, the indications of so many different organs, the cyst formation, the differences in the epithelium in one and the same cyst are readily explained by the assumption of double germinal substrata.

Fig. 7 is from a photograph of a remarkable case which was under Stolper's observation,[2] a giant sacrococcygeal tumor in a child five months of age.

"The tumor is one-half as large as the child itself. It is irregularly ball-shaped, there are muscular movements in it when the child cries. The skin is movable and normal. Extirpation under chloroform. But little loss of blood. Broad pedicle springing from dorsal surface of sacrum and coccyx. Coccyx itself not involved in the tumor. Duration of operation one hour. Death a few hours later. No autopsy, therefore no data in addition to those afforded by the operation.

"*Pathological Report.*—After contents (1,100 c.cm.) of a large cyst had flowed out the tumor weighed three kilos. The lower part of it was cystic. The upper, solid portion, consisted in part of fat and muscle fiber, in part of nerve tissue. There was much intestinal mucous membrane in the cyst walls.

"We have here a giant growth consisting in part of large and small cysts, in part of solid tissue, the latter containing in the greatest irregularity of distribution smooth and striped muscle fiber, fatty tissue, connective tissue, glandular tissue having the structure of the salivary glands, cysts with flat and columnar epithelium, cartilage, nerve tissue, etc. The nerve tissue has but few ganglion cells but is rich in masses of gliomatous tissue."

Stolper's observations seem to be confirmed by a recent case reported by Hagen-Torn.[3] This concerns a very interesting case of congenital sacral tumor which, in addition to many forms of

Fig. 7.

intestinal tissue, contained sarcomatous and myxo-sarcomatous degeneration. He considers it a malignant degeneration of a sarcomatous nature which had its origin in a small, double germinal malformation.

Phocas of Lille[4] reports two cases, one a five-year-old child presenting a tumor 12 centimeters in breadth by 11 centimeters in thickness, and a second child of twenty-two months with a tumor 43 centimeters in circumference, the pedicle of which measured 9 centimeters in breadth and 25 centimeters in circumference. Both tumors were markedly cystic and both showed the most diverse tissue constituents. Extirpation was successful in both cases. Phocas advises delay in these cases until the children reach such age as to enable them to withstand operation. When the tumors are very large it may be better to extirpate them in multiple sittings.

Broca and Cazin[5] made careful examination of two specimens, one from a child of six weeks, the other from a child of four years. Both operations were successful and both specimens showed sections of intestine having about the diameter of a goose-quill, laid down in the midst of large

masses of small cysts. The microscopical evidences of the intestine were characteristic. The cysts were lined with ciliated epithelium. The authors believe the tumors to have sprung from the neuro-enteric canal.

Calbe[6] discusses at length six teratogenetic tumors and arrives at the conclusion that twin monstrosities and congenital sacrococcygeal tumors belong practically in the same class, and that microscopical investigation will show all possible stages between the simplest and the most complicated growths.

Nasse[7] reports on five congenital coccygeal tumors each of which had a ventral seat. Some of these operations were exceedingly difficult; the cysts reached so high in the pelvis that they could not be extirpated *in toto*. The most diverse tissues were found in these tumors—connective tissue, bone, cartilage, flat muscle fiber, conglomerate glands and mucous cysts which showed in

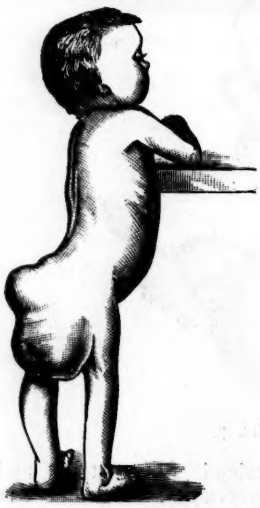

FIG. 8.

FIG. 9.

part ciliated epithelium and in places a transition from squamous to cylindrical epithelium. One of these tumors was a simple dermoid; the author assumes that the other four arose from the post-anal remains of the intestinal tract. Nasse says that while teratomata of dorsal growth often contain nerve tissue those ventrally situated are generally cystic.

Perman of Stockholm[8] reports an operation on a five-months-old child who had a cystic sacrococcygeal teratoma the size of a baby's head. The mass was limited below by the gluteal fold; on the right side it reached to the trochanter major and it stretched some two inches across the middle line in the sacral region. The skin over it was very thin and movable. On operation several large cysts and many small ones were found, together with masses of gliomatous tissue. Large nerve fibers could not be demonstrated. Here and there cubical and cylindrical epithelium. The coccyx was pressed somewhat to the left side, but no gap in the spinal column could be discovered. The child recovered. From the presence of the large amount of gliomatous tissue Perman assumes that the structure came from the same embryonal tissue as the brain and spinal cord.

Ritschl[9] removed a tumor the size of child's head from the sacral region. The mass was found to be made up of many different tissues, in part cystic and in part solid "characteristic fetal rudiments."

Other and similar observations might be cited, but I believe that the foregoing tend to strengthen the assumption that the case which I report may properly be placed in the class of teratomata and embryoid growths. Its appearance at birth and a few months thereafter, its partly cystic and partly solid nature, its size and seat all place it in line with the cases histologically examined by Stolper and others. However instructive it might be to add the pathological report, I am quite content to have had the tumor undergo spontaneous contraction. The age, size and strength of the child, the absence of local pain, tenderness and ulceration, the progressive shrinkage of the tumor itself, all lead me to hope that Nature may have cured the condition. It is possible that further growth may take place, that malignant degeneration may ensue as time goes by. I am unable to obtain record of any case in which a similar tumor has pursued the course of this.

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[2] Loc. cit.
[3] Von Langenbeck's Archiv. Bd. LX., Hft. 3.
[4] Bull. et Mem. de la Soc. de Chirurgie de Paris, Tome XXII., p. 847.
[5] Revue d'Orthopédie, 1895, No. 6.
[6] Thèse de Paris, 1893.
[7] Centralblatt f. Chirurgie, Bd. IXX., p. 1077.
[8] Von Langenbeck's Archiv, Bd. XLIX., Hft. 3.
[9] Beiträge zur klin. Chirurgie, Bd. VIII.

FOUR CASES OF TUMORS.[1]

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DURING the past year four interesting cases of tumors have come under the writer's observation and are deemed by him worthy of record.

Case I.—Osteosarcoma of Inferior Turbinate: A. B., colored, male, aged forty-one years, came to the writer's clinic in the Out-Patient Department of Roosevelt Hospital, September 25, 1900. He stated that for some four months he had had an obstruction of the right naris, constant and increasing. There had been neither pain nor hemorrhage. At times there had been a moderate post-nasal discharge. The patient was stout and well built, but somewhat asthmatic and emphysematous.

Examination of the right naris revealed an apparently bony adhesion between the inferior turbinate and the septum, beginning about three-quarters of an inch from the vestibule and running backward for half an inch. The obstruc-

[1] Read before the American Laryngological Association, New Haven, Conn.

tion was removed by trephining and there was no unusual hemorrhage. Healing promptly occurred and for some time the patient could breathe easily through that side. In a few weeks, however, he returned with the same symptoms as originally noted and examination showed a reformation of the bony mass which was larger than

Fig. 1. Osteosarcoma of Inferior Turbinate.

before. With the trephine a considerable core of tissue was removed and submitted to Dr. Jonathan Wright, of whose courtesy in this and the following cases I would here make grateful acknowledgment. His report was as follows: "The subepithelial tissue of the mucosa is entirely made up of spindle-celled fibrous connective tissue with newly-formed capillaries running through it. The tendency to crescent shapes in the arrangement of the cells presents the familiar picture of a spindle-celled fibrosarcoma. In places there is a proliferation of cells which apparently spring from the endothelium. In the deeper layers (Fig. 1) bony tissue of apparently new formation may be seen with a lining of osteoblasts (Fig. 2) along the edges of the scattered areas. The sarcoma formation fills the interstices of the bony tissue and is quite as characteristic there as elsewhere. In places a double row of osteoblasts may be seen which have apparently extruded the lime salts between the rows, and this has not yet assumed the formation of bone and it appears more or less amorphous. There can, therefore, be no doubt in this case that we have to do with a true osteosarcoma and not with a sarcoma secondarily involving subjacent bone."

In view of the nature of the growth the patient was urged to enter the hospital with reference to a more radical intervention than was possible in the Out-Patient Department. This he agreed to do, but failed to return.

Case II.—True Papilloma of the Nasal Septum: J. T., merchant, American, aged fifty-five years, was seen in consultation with Dr. F. M. Crandall for severe epistaxis. The nasal septum was strongly bulged to the right and presented on its convexity a large erosion from which the blood came. Pure silver nitrate was applied and the bleeding was checked. During the systematic examination of the patient I discovered a small cauliflower-like mass on the left side of the septum at its top just at the junction with the ala. It had given no symptoms and the patient was unaware of its existence. It was removed without incident and proved to be a true papilloma (Fig. 3).

Dr. Wright's report was as follows: "The growth is chiefly a proliferation of epithelial cells which partake somewhat of the characters of both the pavement and columnar varieties. It is supported both on the surface and dipping down into the tissue by a delicate network of connective-tissue digitations with a central blood-vessel, the whole presenting a typical picture of the so-called papilloma or fibroma papillare."

The question of nasal papilloma has been thoroughly discussed at various meetings of this Association and the ground need not be re-traversed here. The case is reported on account of the rarity of true nasal papilloma. Arrowsmith of Brooklyn reported in 1897[1] a case of this nature and stated that he had been able to find in literature up to that time but 29 instances of true papilloma of the nose and that in some cases of the series the diagnosis was by no means certain. Since the date of Arrowsmith's paper I have been able to find records of nine additional cases, as follows: Borgoni, Gior. Ital. di Lar., No. 1, 1899, p. 1; Yearsley, Jour. Laryngol., Vol. xiii., 1898, p. 303; Douglass, N. Y. Med. Jour., Jan. 7, 1899, p. 6; D'Aguano, Arch. Ital. di Otol., Vol. iv., 1896, p. 99; Reale, Arch. Ital. di Laringol., Vol. xx., 1900, p. 57; McKinney, N. Y. Med. Jour.,

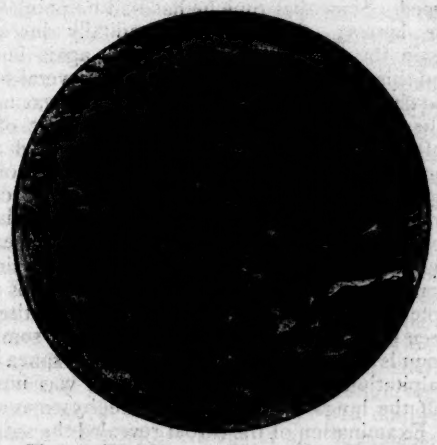

Fig. 2. The Same as Fig. 1, High Power.

Mar. 4, 1899, p. 290; Williams, Diseases of the Nose and Throat, 1895 (two cases); Noquet, Rev. hebd. de Laryngol., Sept. 18, 1897, p. 1121.

Case III.—Sarcoma of Branchial Cleft: G. A. D., American, carpenter, aged sixty-five years, came to the Out-Patient Department of Roosevelt Hospital March 7, 1901, complaining of a "swell-

[1] Laryngoscope, Nov., 1897, page 863.

ing in the throat." The notes of the case are taken from the records of the First Surgical Division of the Hospital, service of Dr. Robert F. Weir, to which the patient was referred for operation. The patient was a moderate user of alcohol, had had lumbago and some catarrh of the throat, but

Fig. 3. Fibroma Papillare of Nose.

had been otherwise well until two years before coming under observation. There was no history of syphilis.

Two years ago he noticed a swelling on the right side of the palate and a soreness in the gums of the same side. The swelling gradually increased, with a continuance of the soreness, until one year ago when it was lanced and a fluid, of thin consistency and clear in hue, escaped. Since that time he has had no pain. After the lancing, the swelling gradually increased again for six months when it was again lanced, and this operation has been repeated several times. No change in the character of the fluid was noted. The swelling began near the middle line of the soft palate and never entirely disappeared after incision, but gradually spread to the side of the mouth and somewhat backward and forward. At first it was supposed by the patient's physician to be some sort of quinsy. Speech gradually became muffled and indistinct and there was some limitation in the movement of the jaws. No lumps were noted on the side of the neck. The appetite had been poor for two years and he had lost some ten pounds in weight. There were dyspnea and palpitation on exertion. The heart was normal, but the lungs were somewhat emphysematous.

Examination of the throat revealed the soft palate pushed well over toward the left by a tumor occupying the right side extending from opposite the last molar tooth upward and inward to beyond the median line, downward to the floor of the mouth and backward into the pharynx. It was tense, elastic and smooth with one or two harder spots on its surface. It could also be felt just behind the angle of the jaw and fluctuation was transmitted from pressure on the inside to the finger on the outside of the mouth. No enlarged glands were discovered either in the neck or on the floor of the mouth. There was slight tenderness over the cornu of the hyoid bone on the right side.

On March 16th Dr. Weir operated as follows: An incision was made from half an inch below the lobe of the right ear down along the middle of the sternocleidomastoid muscle to the level of the thyroid cartilage. A second incision was made from the margin of the jaw one-half inch from the median line to meet the first opposite the hyoid bone, through skin, fascia and platysma, until the muscular planes were reached. The digastric and stylohyoid muscles were exposed. The tumor was felt above the muscles, running up beneath the jaw and the tissues were incised down on to it. The mass was of a bluish color and felt cystic. Blunt dissection with the finger was carried all around it and the tissues freed from it. It was found to reach upward almost to the base of the skull. It was carefully separated from the muscular structures of the pharynx and soft palate, caution being taken not to break through the buccal mucosa to which the sac-wall was attached. In this way the tumor was shelled out. It was about the size of a mandarin orange and on one portion of the wall was a solid mass, in size and shape resembling a tonsil. In the process of removal a portion of the sac-wall was punctured and a bloody fluid escaped. The progress of the case toward recovery was uneventful. The mass removed was sent to the laboratory of the Columbia University Medical School and the report returned read as follows: "Telangiectatic sarcoma of the branchial cleft with hyaline degeneration; lymph-nodes hyperplastic; no tonsillar tissue."

My thanks are due Dr. Weir for courtesies rendered in connection with the case.

Fig. 4. Angiofibroma of Nose.

Case IV.—Angiofibroma of the Nose: J. K., Irish-American, aged twenty years, was referred to me by Dr. E. R. Oastler, April 29, 1901. His family and previous history contained nothing bearing on his present condition. For seven

months he had complained of nasal stoppage alternating from side to side, but finally settling and becoming permanent on the left side. Examination through the nasal speculum showed what was apparently an ordinary nasal polyp hanging from the middle turbinate. The post-nasal mirror, however, revealed a mass in the nasopharynx reaching back from the choanæ, but apparently blocking only the left. On attempted removal with the cold wire of the mass visible anteriorly, the growth proved to be so hard that the wire would not cut through it and pulled out of the snare. On a second attempt the wire actually broke. The bleeding was very free, but was checked with gauze packing. The next day with the same snare a piece was removed and sent to Dr. Wright for examination. On this occasion the bleeding was excessive and was checked with difficulty. The patient has been advised to submit to radical intervention, but thus far has refused his consent.

The report on the growth was as follows: "An irregular fragment of tissue hardened in alcohol of gradually increased strength, mounted in celloidin, cut and stained with hematoxylin-eosin, shows in some areas a structure at first glance resembling an ordinary edematous polyp. There is, however, even in these places much more fibrous tissue than usual, but it has undergone a hyaloid change, the outlines of the fibers being broken, irregular, strongly refractive of light and taking the eosin stain deeply. In the field from which the drawing (see Fig. 4) is taken, there is a dense ovoid fibrous nodule, plainly discernible. Throughout are to be seen numerous vascular channels, enough to warrant the term "angiomatous." They are lined with a layer of endothelial cells, the other part of the walls of the vessels being the fibrous tissue itself. Under a higher power many of the nuclei of these endothelia are seen to be swollen and projecting into the lumen. In the areas where the fibrous tissue is broken, there are large numbers of mononuclear round cells. The epithelium of the surface is of the modified columnar variety without cilia. No glands are to be seen and the new Weigert stain does not reveal any elastic fibers. There are no evidences of malignancy, but from the history I should suspect that the piece removed is not characteristic of the whole. Whatever else the rest of the growth may show, I should expect it to be vascular and fibrous. I see nothing in the clinical history to warrant any other diagnosis than the findings of the histological examination, *i. e.*, an angiomatous fibroma."

Such cases are extremely rare. The one in question has come under observation so recently that I have not had time to look up the literature of the subject. Dr. Wright informs me that he has knowledge of only one other similar case, namely, that submitted to him by Dr. C. H. Knight and which is published in the Manhattan Hospital Reports for January, 1895. In this latter case the growth was small and movable, being attached to the posterior end of the middle turbinate. It was covered with columnar epithelium and was made up exclusively of homogeneous bundles of curling elastic fibers.

The exact origin of the growth in my own case, I have thus far been unable to determine. It apparently springs from the general region of the middle turbinate, but more definitely than this, I cannot say. A physician who saw the case before I did reported that the post-nasal prolongation pulsated. I could not determine this at the times of my examination.

118 West 69th Street.

BIOPSY—THE HISTOLOGICAL DIAGNOSIS OF DERMATOSES AND TUMORS OF THE SKIN OF DOUBTFUL CHARACTER.

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It would be unjust to say that progress has not been made in the last twenty years in exact knowledge of many cutaneous diseases and tumors. Nevertheless in every dermatological clinic and even in active private practice scarcely a month passes without presenting a dermatosis or a neoplasm, the nature of which it is impossible to diagnose with certainty. I do not here refer to the doubts of the practitioner little versed in dermatology; I have in mind the learned and experienced dermatologist, commanding all ordinary or necessary means of information, who may easily find himself face to face with affections which cannot be diagnosed with all the resources of the ordinary clinic.

What can be done in such a case? The lesion has been examined with the greatest care, the entire body has been explored, the patient's previous history and the evolution of the disease have been investigated as far as possible, competent consultants may even have been called in, and doubt remains. This doubt may have the most serious consequences. Suppose, for example, an ulcerative lesion of the nose or lips which might be syphilitic, tuberculous, cancerous or actinomycotic. According to the nature of the lesion it could be cured by specific treatment, or it might demand cautery or scarification, or might call for complete and rapid destruction or ablation. In the face of a spreading lesion shall experimental treatment be tried at the risk of losing valuable time? Or, on the other hand, shall the patient be submitted to a radical disfiguring operation without absolute necessity? In doubtful cases of this nature there is an "invaluable resource which will solve the problem rapidly, almost with absolute certainty, and without discomfort or danger to the patient; I refer to biopsy.

The name "biopsy," coined by Besnier, is most happily chosen. Biopsy is a sort of "autopsy on the living;" it is the excision of an eruptive lesion or a fragment of tumor for the purpose of establishing the diagnostic histology of a malady. It is to take not a scale, a crust or a hair, but a complete eruptive element and thus to add to the

symptomatology of a disease the notion of its pathological anatomy. One can well understand the value of resort to such a means of investigation when the insufficiency or vagueness of the objective and rational signs leave the clinical diagnosis in a state of doubt. Moreover, biopsy makes it possible to discover and describe in complete form a certain number of new diseases which to-day are entitled to a legitimate place in dermatological nosography. Hitherto, biopsy has only been mentioned incidentally and apologetically, apropos of some rare and curious affection, as an extreme resort where all other means of diagnosis fail. It deserves a place different from that which has been accorded it.

The question whether one is justified in removing a shred of skin from a patient is best answered by comparing the advantages of the practice with its disadvantages. The advantage of biopsy is that it furnishes a means of diagnosis, and upon diagnosis treatment depends. Its disadvantages may be briefly enumerated and disposed of, as follows:

1. *The Apprehension of the Patient.*—This is easily obviated by reasoning presented with tact. In more than six hundred proposals of biopsy I have met with only two or three refusals.

2. *Pain of the Operation.*—I shall point out farther along how this can be obviated; the same will be done concerning hemorrhage, which, while disconcerting at times, never is dangerous.

3. *Infection.*—This is easily avoided by strict asepsis. The cicatrix does not seriously enter into consideration if biopsy is resorted to only in grave cases. It may be said that the real obstacle to the general adoption of the biopsy resides in the demands it makes for time and for expertness in histological technic. In any event the physician who is insufficiently equipped or too much occupied to make the necessary histological examination can always submit the specimen obtained to a histologist.

Method of Operation.—The choice of the portion of the tumor or ulcer to be excised is a delicate matter, demanding a clear idea of what one is seeking; on this choice depends the ultimate success of the operation. General instructions can scarcely be given on this point. In the case of an eruptive element, however, it is desirable ordinarily to choose the most recent among the most typical spots found; in the case of an ulcer, the part excised should include the border with a small portion of the base; in the case of a tumor the most characteristic area should be selected.

The dimensions of the fragment to be removed vary according to the case; as a rule, a piece as large as a hemp-seed or a lentil suffices. The process of removal must insure a piece which is neither crushed nor torn. It is inadvisable to use the sharp curette or the scissors because these instruments compress and destroy delicate tissue. Methodical surgical procedure, with incisions by the bistoury under aseptic precautions, with local or general anesthesia, hemostasis and continuous sutures, is applicable only to cases where hairy skin is removed, or where extensive sections are to be made. As a rule this procedure is too long, too complicated and too alarming. The following method is simple and rapid and gives excellent results in an immense majority of cases.

The instruments required are a von Graefe knife, anatomical forceps, histological scissors, either straight or curved, with blunt ends; these are sterilized. The operator's hands are washed; the field is disinfected. If the patient is timorous anesthesia is obtained by means of an ethyl-chloride spray; a disadvantage of this method is that when the tissues are congealed it becomes difficult to distinguish the element chosen for incision. To overcome this obstacle the part may be previously marked with ink; another method is to postpone the operation until the moment when the blanching of the skin disappears—anesthesia is not complete at this moment, but there remains a sort of stupefaction of sensibility.

Subcutaneous injections of cocaine must be rejected absolutely in this operation because of the local edema which they produce, the interstitial hemorrhage provoked by the needle, and the alteration in the tissues which results from contact with an aqueous liquid. But in ulcerations and erosions of mucous membranes one may apply locally a cotton sponge soaked in solution of cocaine, 1 in 10. Practically, local anesthesia may generally be dispensed with. It is well to remember that the best analgesic is an exceedingly sharp instrument.

In making the incision the operator picks up the selected part with the thumb and forefinger of the left hand; this fold is transfixed at the desired depth by the Graefe knife, which is plunged beneath the portion destined for excision; the knife now cuts a flap which includes the desired piece. The flap is picked up with the forceps, is detached at the base by the scissors, and the section is immediately plunged in the fixing fluid.

Hemorrhage usually is insignificant, but is somewhat more abundant where an anesthetic has been employed. A good local hemostatic is a fine powder of juniper-wood, sterilized by heat and impregnated with vapor of creosote. This is superior to antipyrine and more practical than gelatin, which must be softened by heat. Sutures may be resorted to after deep and wide excision of healthy tissue—a rare condition in biopsy. A simple dressing of iodoform gauze held with collodion, suffices.

Histological Technic.—Sufficient instructions on this point cannot be given within the limits of this article. Those familiar with laboratory methods of fixation, hardening, cutting and staining will know how to apply those methods. The most common mistake is to apply a single method indiscriminately to every case. Reagents should be chosen with reference to the object sought. For example, to use alcohol, paraffin or celloidin in examining a xanthomatous tubercle is to de-

feat one's aim, inasmuch as the fat which ought to be preserved would thus be dissolved.

The excised tissue should at once be immersed in the fixing agent which has been chosen. In most cases preference may be given to alcohol or acetic sublimate. Where alcohol is used it is possible to make a section of the already hard specimen within several hours of the operation; by staining with picrocarmine and mounting in glycerin, a rapid diagnosis may then be made. If doubt remains, there is nothing to prevent the preparation of a second specimen by imbedding in paraffin or celloidin in the usual way.

It is frequently important to make the section exactly perpendicular to the skin, or as nearly so as possible, so as to include the various parts of the tissue. For example, in making a section of the border of an ulcer, the part removed should include healthy skin as well as the border and the floor of the ulcer.

Staining and mounting are the final steps. Staining fluids should be regarded as true microchemical reagents of extremely sensitive character, capable of bringing out certain properties of the tissues and elements on which they act; they should be chosen with reference to the problems which present themselves in each case.

Indications for Biopsy.—Biopsy is indicated whenever the practitioner is face to face with a cutaneous lesion, or an accessible lesion of a mucous membrane, of which definite diagnosis cannot otherwise be made. Clinical diagnosis must naturally be pushed as far as possible first. As the nature of a dermatosis often becomes clear when its special evolution is observed, patients should be kept under observation for some time before resorting to biopsy, except in urgent cases.

With regard to urgency, there are two distinct classes of cases. The first group, in which the indication is absolute and pressing, includes tumors and ulcers of doubtful character which tend to invade surrounding tissues, such as tumors of the tongue, lips or face. Here biopsy is obligatory and indispensable, as it alone can decide whether treatment is to consist of specific medication, topical applications, or surgical intervention. Prognosis often depends on precision and rapidity of diagnosis.

It is entirely otherwise with a second group of cases. For example, in the case of multiple tumors, annoying to the patient, but unquestionably benign, or of a persistent eruption of indeterminate character, the biopsy may be proposed as a means of throwing further light on the case. Without attempting a classification of cases in which biopsy is either obligatory or merely useful, let me try to give an idea, based on my personal experience, of questions which this operation may be expected to solve, and of the relative frequency with which these questions present themselves.

In the front-rank must be placed the diagnosis of epitheliomata; the most common cases are those presenting an ulcerative lesion of the face or of the buccal cavity. The clinician is often uncertain whether he is dealing with an epithelioma, a tuberculous ulcer, a gummatous syphilide, a chancre or a dental ulceration; at times even actinomycosis, farcy or sarcoma must be taken into account. Even when all the probabilities point to cancer, it may be desired to settle all possible doubt before resorting to a mutilating operation.

Superficial and benign epitheliomata are sometimes difficult to distinguish from lupus vulgaris, tuberculosis verrucosa or lupus erythematosis. Often in affections which have been termed "precancerous," such as senile keratoma, xeroderma pigmentosum, leucoplasia, Paget's disease of the nipple, one is uncertain whether the epithelial modification has become epitheliomatous. In all these cases biopsy become absolutely necessary.

The numerous varieties of cutaneous tuberculosis furnish frequent occasion for fruitful resort to biopsy. Vegetating or ulcerative lupus may also become a point of departure for the development of epithelioma. The difficulty of distinguishing certain cases of lupus and of tuberculous ulcer from tertiary syphilis, is classic.

The dermatoses which are grouped in the vague class "tuberculides" almost constantly demand biopsy for the determination of diagnosis. This is true for follicular tuberculides, acne cachecticorum, lichen scrofulosorum, and for tuberculides in the form of disseminate lupus. The recognition of lupus erythematosis is usually easy, but there are doubtful cases.

Syphilis produces lesions so polymorphous and dissimilar as to simulate nearly every variety of tumor, ulcer or dermatosis. Hence there is here a large field where the microscope is at present useless. The syphilitic chancre, the secondary and tertiary lesions have a pathological anatomy which appears more and more pathognomonic the more one studies it closely. In any case their histological differentiation from tuberculomata and tuberculides, from leprosy, mycosis fungoides, various species of sarcoma, is nearly always easy; their differentiation from epitheliomata is truly elementary.

The difficulties of diagnosis between syphilides and epitheliomata are related exclusively to biopsy. It is to biopsy and not to the test of specific treatment that one must address himself in a doubtful case. If mercury administered by mouth or by inunctions to patients suffering from epithelioma is simply useless; if insoluble injections (and notably injections of calomel) appear at the beginning of epithelioma to be capable of diminishing the volume of the tumor, iodides are on the contrary distinctly injurious to such patients, inasmuch as they stimulate the epithelial neoplasm. Hence here as elsewhere diagnosis must *precede* treatment.

Leprosy must be more and more taken into account in doubtful cases, since easy communication has been established with countries where this malady produces its most serious ravages. In the early periods the presence of Hansen's

bacillus may be demanded to make the diagnosis certain. Recent researches have shown that often one can discover this germ in the mucous membrane of the nasal fossæ. If this fails, and if the case presents suspicious tubercles or even macules, it is necessary to resort to biopsy.

Mycosis fungoides is another grave disease in which one should surround his diagnosis with every guarantee of accuracy. The structure of these tumors is characteristic; but biopsy is especially valuable for diagnosis during their early stages, when they present the appearance of eczematous or lichenoid plaques, or of mycotic erythodermia.

Sarcoma and its special varieties, lymphosarcoma, angiosarcoma, fibrosarcoma, often cannot be diagnosed with precision without resort to the microscope. In actinomycosis, farcy and glanders, rhinoscleroma, the pathogenic element is relatively easy to discover; nevertheless biopsy may be here appealed to to furnish an additional diagnostic point.

Cases in which biopsy is optional are those of benign multiple tumors which are depressing because of their number and persistence. If any doubt remains as to the nature of such tumors it is wise to propose biopsy. This group includes nævi, sebaceous adenoma, lipoma, fibroma, myoma, angiokeratoma.

In special cases I have resorted to biopsy for the diagnosis of common dermatoses, which in an immense majority of cases can be differentiated without question by mere clinical examination. Among these are seborrheic eczema, psoriasis, pityriasis rubra pilaris, lichen planus—the latter, especially in atypical forms, may accidentally present problems which histological examination is capable of solving.

To sum up, biopsy is an operation which furnishes an easy and rapid means for establishing or confirming a diagnosis otherwise impossible or doubtful in the case of various dermatoses and cutaneous tumors. It is too often neglected by some, and very rarely employed by others. For this reason I have believed it worth while to recall it to the attention not only of dermatologists but of physicians and surgeons generally.

REPORT OF TWO INTERESTING CASES OF APPENDICITIS.[1]

BY WILLIAM B. YOUNG, A.M., M.D.,
AND
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THE question of when and how to operate in all cases of appendicitis is still an unsettled one, and until it is definitely determined, I suppose papers will be read and discussed at the meetings of almost all medical societies. In point of fact such should be the case, because the more the subject is discussed the nearer we approach the truth.

[1] Read before Upper Cumberland Medical Society.

The two cases I here report proved to be very interesting and just a little puzzling to the members of our County Society, and for this reason I decided to read a report of them before the Upper Cumberland Society.

Case I.—This was a patient of Dr. H. L. Fancher, who has kindly given me the following history:

"Boy, aged four and one-half years. Dr. Fancher was called to see him on June 27, 1900, and found him in bed with a pulse of 130 and a temperature of 103° F., with considerable tympanites. The parents said that he had been sick three or four days and that his bowels had not moved during that time. The child did not complain of pain, but was very nervous, with extreme subsultus tendinum. He was given ½ grain of calomel every hour until 2 grains were given; to be followed next morning with castor oil.

Next day found the patient's condition was unchanged and without a bowel action. Magnesium sulphate was ordered, one dram, to be followed in four hours by an enema, after which the bowels moved and temperature dropped below 100° F., pulse better, and nervous symptoms improved.

After this the fever began to rise gradually, with morning remissions, until on the fifth or six day the temperature was 105° F. and in the evening he had a dry tongue and some tympanites; assuming by this time a typical typhoid condition. About July 10th the boy began to complain of tenderness in right iliac region, and there was suddenly developed a board-like rigidity of muscles on the right side."

On July 15th I saw the case in consultation. On the 16th the boy was improving, it seemed, and we deferred operation. But on the 20th the condition was much worse, there being extreme tenderness on the right side of abdomen and an enlargement about McBurney's point. I advised an immediate operation. Dr. John P. Williams saw the case at this time and agreed with us in regard to the necessity of operating. I operated on July 21st, assisted by Drs. Fancher and Williams, I opened the abdomen near McBurney's point and found a hard agglutinated mass seemingly just over and a little to the right of the promontory of the sacrum. There were bands of adhesions which ran from this mass to the liver, right kidney and to the umbilicus. Just underneath the umbilicus the adhesions were thickened, forming a hard lump about the size of a large marble, which could be distinctly felt before the abdomen was opened. Not being able to find the appendix, locate any pus nor make a clear diagnosis of what we found, and on account of the very weak condition of the little fellow, we decided to simply close the abdominal wound and trust to Nature.

I was confident that the boy would die, but to our surprise the day after the operation the temperature and pulse began to drop. On the eighth day after the operation the stitches were removed, the wound having healed by first intention, and the temperature and pulse were normal.

On August 5th the case was dismissed, the patient being able to sit up. About the fourth day after the operation the child passed (so the father stated) about one-half pint of bloody pus from the bowels, also quite a quantity of thick milky urine for several days. The urine we examined and found that it contained a quantity of pus.

Dr. Fancher and I at first believed the case to be one of typhoid fever. Whether or not the Doctor has changed his opinion I do not know, but after a careful review of the literature of appendicitis, I am now of the opinion that it was an atypical case of appendicitis. At this writing the boy remains sound and well.

Case II.—I. L. Mc., of Spencer, Tenn., a physician, twenty-eight years old. Previous health from childhood good. About October 1, 1900, the doctor began to feel unwell, and for a few weeks was hardly able to attend to his practice. This he attributed to losing sleep from a busy season in his work. His tongue was coated and he suffered from headache. About three weeks after the beginning of his malaise, he began having wandering pains in the abdomen, lasting from one to five minutes. Between the attacks of pain, he would be entirely easy except for a vague feeling of indisposition. This general painful condition of the abdomen lasted six or seven days, when it became distinctly located at McBurney's point. Within twenty-four hours from this time, the pain became localized and had increased in severity until it was hardly bearable. It required from four to six grains of sulphate morphine in the twenty-four hours to give him relief. This intense pain lasted at this point for about four days, when, all at once, the pain left McBurney's point, and extended along Poupart's ligament down the right thigh. There was also intense pain in the lumbar region. There was no vomiting during the entire course of his illness, but intense nausea was constant. The doctor has no remembrance of having had a chill, nor even chilly sensations. About twelve days before the operation, the doctor's wife took his temperature and it was 102° F. From this time up to the hour of operation his temperature ranged from 100 to 103° F.

November 11th, Dr. A. F. Richards of Sparta was called to see the case, in the absence of Dr. R. E. Lee Smith of Doyle Station, who was detained at the bedside of his dying mother. I will state here that Dr. Smith saw the doctor during the first part of his illness and from the headache, anorexia, the malaise, and so forth, diagnosed it slow fever—a diagnosis I believe any physician at that time would have made. When Dr. Richards saw the case two days before the operation, he diagnosed an appendicular abscess, asked for consultation and they telephoned for me.

After examining the patient, I agreed with Dr. Richards that there was an abscess, but leaned to the opinion that it might be a psoas abscess. So soon as we could procure help from Sparta, fifteen miles distant, assisted by Drs. Richards, Moore and Gist, I opened the abdomen close to the anterior superior spine of the ilium, hoping that we might be able to open the abscess cavity without going into the general peritoneal cavity. But we found this impossible, as we discovered a post-cecal collection of pus. There were no adhesions along the parietal peritoneum and we could sweep our fingers around over the abscess sack, under the anterior abdominal wall—it reminding one of a football in size and shape. It was very fortunate that I made the incision where I did, for the intestines and omentum were all matted together with masses of lymph walling off the pus from the general peritoneal cavity; and there was no space in which an opening into the pus sack could be made without difficult and dangerous dissection, except a space the length and width of the little finger right next to the bony wall. When I entered the abscess cavity with a bistoury, after packing off the general cavity, the pus squirted past the knife to the height of two or three inches. On further enlarging the opening, very offensive pus poured out over the side of the patient, reminding one of water pouring from the spout of an old-fashioned teakettle. The quantity of pus was estimated to be more than a quart. After cleansing the sac as best we could with iodoform gauze, it was gently packed with the same material and the external dressing applied without even irrigating, much less hunting for and attempting to remove the appendix. The patient made an uneventful recovery without a fistulous opening. I wish to state, much to his diagnostic acumen, that Dr. McC. (the patient) believed for some days before the operation that he had an appendicular abscess.

In January, 1901, a few weeks after the wound had entirely healed and the Doctor considered himself well, having regained his former weight and so on, he was taken with a severe attack of influenza. His temperature ran high and the cough was violent and spasmodic. After a day or so there was pain at the site of the old abscess during each paroxysm of coughing. Soon a distinct induration was felt in the region of the scar.

Dr. McC. being so far from a physician (ten miles) decided to be moved to Sparta, fifteen miles distant, where he could have constant medical attention. When he reached Sparta Dr. Richards and I were telephoned for and after a consultation with Drs. Smith, Gist, Breeding and Snodgrass, we deferred operating again until the symptoms were more pronounced. While we procrastinated the abscess ruptured in the scar of the abdominal incision on the day and just a few minutes before the hour set to do a second operation and in the presence of Drs. Smith, Gist, Snodgrass, Lee, Richards and myself. With a soft rubber catheter we washed out the pus sac and again packed it with iodoform gauze without an anesthetic. Dr. McC. remained in Sparta some two or three weeks and the wound was packed every other day by Dr. Richards. After returning to his home, where there was no other physician, his wife packed the cavity. To-day he is

stout (weighing over 200 lbs.), and well, except for this fistulous opening.

Just what the attack of influenza had to do with the return of the abscess, I am not prepared to say. Some French surgeons claim that the germ of influenza quite frequently plays an important part in the production of appendicitis. I am of the opinion that the Doctor is now ready for the removal of the appendix by a secondary operation.

After searching through the literature on appendicitis at my command I find other physicians have met with cases similar to the two I have just described. Among the most interesting are those reported by Dr. H. A. Hare of Philadelphia in the MEDICAL NEWS of July 21, 1900, in an article, "Appendicitis and Typhoid Fever." One case was so strikingly similar to one of my cases, I shall take the liberty of calling your attention to the principal features.

"A young man twenty-one years of age had not been feeling well for several weeks during which time he had a headache. He first complained of pain in the left hypochondrium and in the epigastrium although the entire abdominal region seemed unduly sensitive. There was pain on pressure over the appendix and virtually every symptom necessary for appendicitis—slight rise of temperature, quick pulse, and the abdomen scaphoid. On the second day the pain was markedly increased and was limited to McBurney's point; the abdomen was distinctly hard and board-like. The second day after entering the hospital the symptoms were so typical that Dr. Keen was called in to operate for appendicitis. He agreed with Dr. Hare and they decided to operate in the afternoon, but in the absence of Dr. Keen the patient grew so much worse, Dr. Hearn was called in to do the operation. He concurred in the diagnosis of appendicitis, and urged an immediate operation. Just before beginning the operation the tongue was again examined and on account of it looking somewhat typhoidal, the operation was again postponed. The next day the symptoms were no worse, and to state matters briefly the symptoms gradually faded as those of typhoid fever became more and more accentuated, and at the end of the week all the symptoms of appendicitis had disappeared and typhoid fever was present in its fully developed form."

Dr. Hare states in this paper that he had several just such cases, and it is my opinion that most every practitioner has had similar cases, which he can call to mind or else has overlooked.

The cases reported would naturally suggest the question, When should we operate for appendicitis? There is another question I would like to have discussed by the members of this society, When a large appendicular abscess is opened and the pus evacuated, should we search for and remove the appendix in all cases?

In answer to the first question I might say a great deal would depend upon what the patients and their friends would have to say. During fourteen years of country practice I find that the laity are usually "bitterly opposed" to surgical procedures, however simple they may be, and this I believe to be occasioned by too great conservatism on the part of the country physician. I have now under palliative treatment two uterine cancers which in a short time must carry their victims to a premature grave. Had they applied to a competent surgeon and submitted to a hysterectomy, their lives, in my opinion, could have been assured, so far as this insidious enemy was concerned.

I cannot refrain from saying "Like priest, like people," and we might just as truthfully say "like physician, like patient." We should ever be fresh on the differential, diagnostic points of medical and surgical cases. I am quite sure one reason we country physicians do not meet with as many cases of appendicitis as our city compeers is from the fact that we often fail to make the proper diagnosis. For the same reason we do not so often encounter ectopic gestation, a condition some authorities claim should occur quite frequently in the practice of a physician, doing even an average practice, and it is for the same reason we infrequently have cholelithiasis to treat. From some tubulated postmortems they report one-third of the subjects possessed gall-stones.

I am not an extremist for cutting. There is a beautiful mean, the haven for our patients. Let us not be too handy with our scalpels. Upon the other hand, we should fight against "old fogyism" and the hypnotic state, too conservative and not quite enough preservative. Let us educate our patients that honorable surgery is not butchery, that palliative medicine in operable cases is a deadly dose, and that procrastination in such cases is the thief of their lives.

I would answer the second question by stating that there are cases where I would not be justifiable in attempting to remove the appendix, but for Deaver and surgeons of his skill it possibly might be entirely the proper procedure.

THE PHYSICIAN IN RELATION TO THE DISPENSING OF MEDICINE.[1]

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FROM many and varied sources there comes unmistakable evidence that a radical change is taking place in the feeling of the profession throughout the country, regarding the dispensing of medicine direct to the patient by the physician. This is evidenced by the discussions in both medical and pharmaceutical journals, by the acknowledged marked diminution of prescription work in the leading pharmacies, both in the East and West, and in the greatly increased business reported by all the great manufacturing phar-

[1] Read before the Colorado State Medical Society, June, 1901.

macists who cater directly to the physicians' trade. Is this a step backward or forward?

We have noted in our own country the transition of the modern physician, with his smart little case containing practically no medicine from him of the capacious saddle-bags and ample attic supply of fifty years ago or more. We have seen at least one generation of doctors rise up which is as profoundly ignorant of the physical, chemical or botanical properties of the drugs which he uses in his battle with disease as it is possible for any educated man to be. We have seen students graduate from the foremost medical colleges who, after four full years of most diligent study and research, knew of no way of differentiating potassium iodide from common salt or Epsom salts from oxalic acid at the bedside. We have seen many older practitioners who did not know what the U. S. Pharmacopœia was, or its authority. And must we not, nearly all of us, admit that we receive even to-day a large part of our supposed therapeutic knowledge from the innumerable alleged medical journals which flood our mails and which are published solely in the interest of secret and proprietary remedies, often combined in "prescriptions" fearfully and wonderfully devised? Should we not hesitate, then, before changing to a system which will at least presuppose a confidence in the remedial effects of the drugs we use, a knowledge of their physiological action and the ability and willingness to observe results closely and to judge fairly?

We recognize that in times past a dispensing physician has been a term of opprobrium no less severe than that of a prescribing druggist, but this should not prevent our willingness to study present conditions and future prospects along this line. There are doubtless many men whose time is so fully occupied and who have at their command an educated and conscientious pharmacist, that they would seldom care to consider the question of their dispensing any medicines whatever except in some emergency, but the average practitioner, even in the city, I find is constantly using a more generous pocket case and seldom cares to-day to write a prescription for a few tenth-grain calomel powders, or for a couple of Dover powders. It is vastly easier to hand them out from his pocket case in the form of tablets.

But to those of us who practise in smaller towns or in the country, where perhaps we must rely upon the ordinary druggist of uncertain attainments, of limited experience and of doubtful stock, this becomes a more vital and important question than many others upon which we devote much time at our annual meetings and in our journals.

Can we be more certain in the results, more accurate in our dosage, more satisfactory to patient and friends, by dispensing our remedies ourselves at the bedside, than by sending our prescriptions to the pharmacist if there be one? If all these points can be answered in the affirmative our duty is plain and discussion useless, except as to ways and means. It is true that in many of the country districts we have been compelled by our environment to adopt this plan, whether it is really best or not, because of the long distance from any other source of supplies, but the question is, Should the practice be more general and from choice, not necessity.

As to certainty in results, I do not belong to the school of therapeutic nihilists myself. I do not believe that six weeks in bed is the only efficient treatment for rheumatism, or that four weeks in bed with cold baths and proper diet is even a rational complete treatment for typhoid fever, notwithstanding its advocacy by honored clinical teachers. Still, as I have stated in a previous paper presented to this Society, I do believe that most of the Galenical preparations of even our best pharmacies are uncertain and unreliable from their very nature and because of the necessary constant variation in their real medicinal content. The remedies dispensed by the modern physician are not so, being as a rule definite permanent alkaloids or active principles, accurately divided in definite doses by the granule or tablet form in which they are used and expressly prepared for this purpose, making the medication as certain as possible in its results; while its form, which may be modified as a pill, powder or solution, one remedy or several combined, gives unrivaled opportunity to adapt the remedy to the particular case in hand.

Is it more satisfactory to the patient and friends? That must be a matter of personal observation in each community. My own experience is very strong that it is. We all recognize the value of the personality of a physician in inspiring confidence in his patient, and where the patient observes this physician in whom he has such confidence selecting and preparing his medicine right there at the time of his visit, his confidence in a favorable result is immensely increased and no chance is left for those lurking suspicions so natural at such a time, that maybe the druggist did not prepare it properly. It is true that under such circumstances if the results are not what the physician would wish, he cannot lay the blame on the druggist. I cannot too strongly urge this point of the increased satisfaction which medicines given by the doctor give both patient and friends. Another great advantage is the opportunity for making such changes as the progress of your case may demand without attracting notice. We may leave medicine in the morning and find by evening that conditions are quite different from what we supposed or expected. A new prescription, the discarding of the previous medicine, all attract attention and comment, while the dispensing physician may modify, renew or discard with none but himself to consult.

Another important point is the ease with which we may obtain our results by this method. I suppose that there are few of us to-day who do not recognize the general rule of giving any medicine which may be indicated by itself, if

possible, until its definite therapeutic or even physiological effect has been obtained. This means an extremely variable dose which can seldom be provided for as the case progresses unless you are dispensing the medicine yourself, but never under any circumstances where you are drawing your supplies from Galenical preparations of varying strengths, differing ages, unknown origin and from competing pharmacies.

If, then, we conclude that this system is better, safer and more satisfactory to the patient, is it practical, is it wise, is it desirable for the physician? I have already intimated several ways in which it is of advantage to him and I might mention another point of no little importance to those of us who depend solely upon family practice, and that is that in this way we retain a large amount of minor work which otherwise would not come to our office at all. There are very many cases of slight fevers, indigestions, headaches, coughs and bowel troubles which are commonly treated in the family, by the advice of friends or of the druggist, which under this system come to be placed more and more under the care of the family doctor. Not always do these cases mean a straight office fee, but at least they mean something, besides giving one a closer hold upon the family. On the other hand, the question arises, Is such a plan practical for the average practitioner? Does it not involve too much expense without return? Are not there chances for serious mistakes? In a word, does it not add to the burdens of the physician rather than lighten them? I have not found that any of these objections hold good. Almost the only reason why our predecessors so largely abandoned dispensing and began prescribing was because of the skilled labor and complicated processes necessary to extract the medicinal activity from plants, the bulky and inconvenient form in which nearly all medicine existed and the liability to mistakes and errors in guessing at the different doses by the bedside. Now all of this has been wholly changed. Granules and tablet triturates enable one to carry in a two-dram vial the active principle in convenient, accurately divided doses, equivalent to one quart of syrup of ipecac, and proportionally of other remedies. In fact, a thin pocket-case will to-day hold more real medicine than the largest buggy-case of twenty years ago.

For we must recognize that pharmacy has changed during the past thirty years no less radically than medicine and surgery. No longer does the druggist gather his herbs himself or buy them of those who do. Seldom does he even make his own preparations from them, and never does he pretend to extract the active principles or to manufacture his chemical salts. No, progress in this line as in all others has been toward eliminating all of these operations on a small scale and confining them to those great manufacturing houses where unlimited capital provides the highest skill, the most perfect apparatus, the most extensive gathering of their supplies and their most rigid testing, chemical and physiological. If the average druggist has become, by the force of these conditions, merely the merchant whose business is the buying and selling of certain articles, and such is the case in more than nine-tenths of our pharmacies, why should we still possess the delusion that he is a necessary professional partner?

It is objected that when once a physician limits himself to those remedies which he himself carries, he gets into ruts and makes a limited assortment answer when perhaps he would make a wider selection more accurately fitted for the case in hand were he prescribing from a well-supplied drug-store. Theoretically this appears to be true, yet it is almost humiliating to find within what narrow therapeutic lines our most prominent men confine themselves. There are to-day in our Pharmacopœia more than nine hundred official remedies and we know that very many of those most used are not yet official, yet in one of the largest hospitals in this country, with their staff of over one hundred physicians, I found their dispensary to contain less than one hundred remedies and almost three-quarters of their three hundred daily prescriptions were prepared from twenty-five of these. My experience of many years behind the prescription-counter in this and other cities proved to me again and again that ninety out of every hundred consecutive prescriptions by any one man could be prepared with a list of thirty-five remedies. Of course, a larger number taken consecutively would show a wider variation owing to the changing seasons and the trial of newly recommended drugs. So I would submit that an average practitioner can readily select, say, fifty remedies or combinations, which will include all that he will under any circumstances use in nine-tenths of his work, and with them he will form combinations more efficient and more acceptable in every way to the patient than the prescriptions he writes, for in this way he will learn how atrocious some of the recommended formulæ in our standard text-books are to sight and taste, especially if he tries to administer them to children. These fifty selected remedies would not occupy six feet of narrow shelf-room and half of them would be needed in the pocket case. One's location and surroundings and one's own experience would say to what extent this stock should be increased. In my own case, although I have for years owned the only drug-store in our community, I have found it far more satisfactory in every way to attach a complete dispensary to my office, and provide it with every convenience for easy and accurate work, so I find that I have over six hundred remedies and preparations on my shelves, yet of my last thousand prescriptions, for I keep as accurate a record of all medicines dispensed, as though the prescription was to pass through another's hands, nine hundred and twenty were drawn from a group of forty remedies of which twenty-two were alkaloids, five synthetics and thirteen chemical salts.

In conclusion, I would only enter a plea for a thoughtful recognition of the changed conditions of to-day and for a return to that accurate, well-trained clinical observation of the actual effects of every remedy administered by the physician in each case that he treats, to the end that the vast mass of therapeutic trash which now confuses and misleads us may be wholly swept away and that the physicians of the present and future may be so trained and educated as to give to this most important branch of our profession, that same skilled attention, born of scientific laboratory methods, which they now give to differential bacteriological diagnosis or to blood-examinations.

This will only be when our colleges and the profession at large will have turned from the traditions and customs of the past and brought themselves into the closest possible contact with the Nature and peculiarities of the weapons which they are using and their improved and modern forms.

ANCHYLOSTOMA DUODENALE IN TEXAS.[1]

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WHILE anchylostoma duodenale has been widely recognized as a parasite of the human intestine in various tropical and subtropical regions of both hemispheres, its observation in the United States has been extremely rare. It was recognized[2] as early as 1830 in Louisiana by Chabert and in 1840 by Duncan, and in Georgia by Lyell in 1849. Blanchard[3] mentions its observation also in South Carolina by Heusinger and Geddings and in Florida by Little and Letherman. In 1867 White[4] exhibited before the Boston Society for Medical Improvement several specimens of the worm which, however, were obtained from a patient of Dr. Wucherer in Bahia in Brazil. In 1893 Blickhahn of St. Louis[5] encountered a case in the person of a German recently immigrated into this country, and specimens of the parasite from this source were demonstrated before the Philadelphia Pathological Society by Stengel about the same time.

In 1894 in a paper read before the Texas State Medical Association upon observations upon human parasites encountered in his forty years of practice of medicine, F. Herff of San Antonio[6] mentions the case of a Mexican woman in whom at autopsy he encountered several examples of what he believes to have been the parasite in question; and refers to having met with the symptomatology of the worm in several Italians under his care at a later period.

In a hasty examination of the usual works of reference the writer is unable to meet with other instances credited to the observation of American, particularly Texas, physicians, and therefore believes the records of the following case worthy of presentation, particularly as there is distinct reason for believing the parasite a not very uncommon, but generally disregarded one in this part of the world. In the summer of 1893, while demonstrating to a private class the microscopical characteristics of the human stool, the material being obtained from the general closet of the medical school in Galveston, Dr. Allen J. Smith encountered the ova of the parasite in considerable numbers, but was unable to find the person from whom the stool had been discharged. In the winter of 1898-99 he twice encountered very similar worms in the intestines of dogs killed in experimental work in the institution, two specimens from this source, attached to the intestinal mucous membrane, being now exhibited in the museum of the school. Since the recognition of the case to be described a similar discovery of ova in the fecal matter taken from the closet for the purpose of class demonstration has been made with this in view, and led by the general symptoms of the patients and the discovery of more or less well-marked eosinophilia in the blood of two of the medical students apparently suffering from malarial attacks, Dr. Smith has examined the stools of both subjects and succeeded in demonstrating the anchylostoma ova in both. In the first of these two cases the malarial parasite was also met, and after a few days the patient went home before measures for the elimination of the intestinal parasite could be taken. In the second case no malarial hematozoa were found after repeated and prolonged search; on April 22d, after the administration of large doses of thymol, two female anchylostomata were obtained by Dr. Smith.

It would seem, therefore, that hitherto insufficient attention has been given to the possibility of the existence of this worm in patients living in this region, and that it is desirable in cases of indefinite anemia associated with gastro-intestinal disturbance, and perhaps edema and irregular febrile paroxysms similar to those of malarial fever, to make careful microscopical examinations of the fecal matter with a view to recognizing or eliminating the possible influences of this worm.

The case under personal observation is a patient in the United States Marine Hospital wards in St. Mary's Infirmary at Galveston, under the care of Dr. W. Keiller to whom the writer wishes to express appreciation for the courtesy in permitting this presentation.

G. S., white, sailor, aged forty years, born of American parents in Melbourne, Australia, where his father was a merchant. There is nothing of special importance in his family history, his father dying from cardiac disease at the age of fifty-two years, his mother from unknown cause at the age of sixty-two or sixty-three years, and the one other child, a brother,

[1] From the Pathological Laboratory of the University of Texas, 1901, read before the Texas State Medical Association.
[2] Dolley, Annual of Universal Medical Sciences, 1891.
[3] Traité de Zoologie Médicale, Vol. I., p. 744.
[4] Boston Medical and Surgical Journal, Vol. LXXV, p. 427.
[5] MEDICAL NEWS, 1893, Vol. LXIII., p. 662.
[6] Transactions of Texas State Medical Association, 1894; Texas Medical Journal, June, 1894.

drowned. The patient lived in Australia until eleven years of age, when he went to sea, and since then has spent most of his life as a sailor upon American vessels, for the most part in long voyages between New York and China *via* the Cape of Good Hope. During his seafaring life his health has been invariably excellent, the present illness being the first compelling him to go to bed for any protracted period. In the early part of last August he accepted a position as overseer upon a large plantation in the State of Chiapas in the southern part of Mexico, remaining in service at this place sixty-five days before his failing health forced him to leave. The patient attributes his present illness wholly to the effects of drinking notoriously unfit water from a creek and river from which all the water supply of the plantation was obtained. While after heavy rainfalls the river water was not unpalatable, at other times it became greenish in color and nauseating to the taste. Large numbers of persons employed upon the plantation had been known to sicken and often to die, not only the overseers and workmen, but women and children, who are not engaged in any of the field work, almost all after the same train of symptoms presented by the patient; and even the Indians rarely remained in the locality more than a week or ten days, invariably leaving because of the lack of proper water. Two days after the arrival of the patient at this plantation there came a colony of about seven hundred Russian peasants to work upon the estate, and in the sixty-five days of his stay there the patient states that no less than three hundred and seventy-eight had died; many others had left and most of the few who remained were sick, pallid, emaciated and often dropsical. Nearly all took sick with vomiting, bloody diarrhea, developed an intermittent type of fever and rapidly wasted. After the disease had proceeded some degrees the limbs usually became swollen, the dropsy extending in some instances to the abdomen, and generally after the development of the edema death occurred.

The food served on the plantation the patient describes as not very agreeable; for the most part it was well enough cooked, but the service at table was not appetizing. It consisted mainly of frijoles and rice with fresh meat about three days in the fortnight. Aside from these features the patient is unable to indicate any definite fault in his mode of life at the plantation in question. After he had been on duty at this plantation for about two weeks (about the middle of August) he lost his appetite and became nauseated; presently persistent vomiting and diarrhea set in, and he developed irregular malarial-like febrile paroxysms. These symptoms persisted and became severe; after the seventh week he rapidly lost weight and strength, so that about the tenth week he was forced to relinquish his position and make his way back to the coast. When he left Vera Cruz for the plantation he weighed 175 pounds; when he left his weight had fallen to 125 pounds. He returned to the coast and remained there for several weeks until an opportunity to ship on a schooner bound for Sabine Pass was afforded. He remained at Sabine Pass for several days, then came to Galveston, arriving on December 21st, and at once entered the hospital. On the trip from the Mexican coast he improved somewhat generally and was able to take a hand at the wheel, but was unable to do the general work of a seaman. When the diarrhea first set in it was not dysenteric in character, but about September 10th he began to note the presence of blood in the discharges, and during the remainder of this month and the early part of October considerable blood and mucus were constantly present. Much tenesmus accompanied this diarrhea, especially during the time when most blood was being passed, the pain being so great that at times when at stool he lost consciousness. At the worst period the discharges were very frequent, as many as several dozen in the twenty-four hours, the least solid or liquid food, especially water, being at once followed by intense tenesmus and an urgent desire to evacuate the bowel. After leaving the plantation this condition improved somewhat, the discharges becoming somewhat formed and reduced in number to about seven or eight in the day. After he shipped on the schooner to Sabine Pass they were further reduced to about three or four in the twenty-four hours, and remained thus without much blood showing up to the time of admission to the wards. During this period of diarrhea and emaciation the patient's appetite was absent, he became very pallid and icteroid, and at irregular periods there were paroxysms of chills and fever. In the latter part of October, while on the Mexican coast before shipping to Sabine Pass the patient first noticed that his feet and ankles were becoming swollen to the extent that he was unable to wear his boots; the swelling was accompanied by considerable discomfort from the tenseness of the skin and from more or less severe rheumatoid pain in the limbs and feet. The skin of the ankles and feet became diffusely bronzed and several large bullæ appeared upon both feet and ankles, filled with an acrid, clear serum, and healing without scar formation after being punctured several times in different places.

When the patient was admitted to the Marine Hospital wards on December 21, 1900, his condition was as follows: He is a man five feet and ten inches in height and weighs about 125 pounds, much emaciated and pale, with a distinct icteroid tint of the skin and conjunctivæ. He is very weak, but able to stand and walk about the wards; the ankles are diffusely pigmented and pit deeply on pressure, the edema extending as high as the knees. He complains of considerable discomfort from the latter and a dull pain in the limbs, as well as of some discomfort and tenderness in the abdomen, particularly in the region of the spleen. Examination of the chest shows no important pulmonary alteration; the respirations are variable, sometimes slow, sometimes

rising as high as thirty to the minute, and generally rather shallow. The pulse is generally rapid (about 100 per minute) and soft; and a soft systolic murmur can be heard in the mitral areas. No enlargement can be detected in the hepatic or splenic areas; but there is decided tenderness in the left hypochondrium.

About the time of admission the temperature was elevated to 38.9° C. (102° F.), falling the next day to about normal; on the third day slightly subnormal; on the fourth, 38.2° C. (100.7° F.); on the fifth, 36.6° C. (97.9° F.); on the sixth, 38° C. (100.4° F.); on the seventh, 37.9° C. (100.3° F.); on the eighth, the same; on the ninth, 37.3° C. (99.1° F.); on the tenth, 39.6° C. (103.3° F.); on the eleventh, 36.7° C. (98.1° F.); on the twelfth, 40.5° C. (104.9° F.), and thus onward, for the most part nearly normal or slightly subnormal, with irregularly appearing accessions corresponding to malarial-like paroxysms in which the temperature would often mount to over 40° C. (104° F.).

These paroxysms, while rather irregular, were in their occurrence somewhat suggestive of a quartan type of malarial fever, and at first a tentative diagnosis of this affection was made and the patient treated accordingly. Repeated examination of the blood by the writer and others failed, however, in every instance to detect the hematozoa, although there was always recognized a distinct leucocytosis in which an eosinophilia was apparent. Administration of quinine and of arsenic apparently had no effect upon the paroxysms or upon the general trend of the disease. On January 25th the writer detected *ameoba coli* in the stools, although the probability of their presence as accounting for the dysenteric symptoms had been previously recognized and treatment for the relief instituted with considerable benefit. At this time the ova of the anchylostoma were overlooked, and it was not until February 17th that the writer while making a careful examination of the stool encountered these objects. At this latter date the stool was soft and unformed, of a rather reddish color from the diffuse admixture of blood; numerous amebæ were met with in active movement, as well as trichomonads. The ova found were in considerable numbers, every specimen of the matter put under the microscope containing several. They were clear, oval bodies, measuring from 55-60 micromillimeters in long diameter, and about 45 micromillimeters in transverse diameter. Within was to be seen a yolk substance in varying degrees of segmentation, usually four or five divisions showing clearly. These objects were, after discovery, readily identified as the eggs of the anchylostoma, and accordingly reported together with the other parasites and the blood and mucus everywhere met with in the specimen. On February 20th, while this stool was being demonstrated to the class in the medical school, a few eggs of the *trichocephalus dispar* were encountered by members of the class and reported to the writer by Dr. Smith. In the meantime, on February 18, Dr. Keiller with a view of expelling the anchylostomata had administered the ethereal extract of male fern, sending all stools to the pathological laboratory for recovery of any parasites passed. On February 19th the first stool following the administration of the anthelmintic was washed through a fine screen of cheesecloth, but no parasites were found. On the following day a second specimen was washed and in this one male *trichocephalus dispar* was found. At about this time the general condition of the patient was more or less alarming and the prostration was such, taken with the frequent and severe febrile paroxysms, that active measures for the expulsion of the worms from the intestine were suspended until March 7th, when the patient had partially recovered his strength. Thymol to the amount of a dram and a half, given with the usual preparation and precautions as to the avoidance of oils and alcoholic substances during the period of its presence in the body, was administered upon the latter date. In the stools following this administration there were found between ninety and one hundred anchylostomata, but no trichocephalids. Almost immediately after recovery from the exhaustion of the remedy the general condition of the patient began to improve, although the general symptomatology was maintained in less severe form. Subsequent examination of the feces showing the persistence of ova of both parasites on April 18th, the thymol was repeated and the stools for the next forty-eight hours washed through a sieve of cheesecloth; on this occasion six or eight more anchylostomata were found, but no trichocephalus. To the present time eggs remain in the stools, but in diminished quantities, and further administration of the anthelmintic is required. The patient is much improved, the icterus is entirely gone, the edema has disappeared, and the febrile symptoms have much abated, but as late as April 21st a paroxysm in which the temperature mounted to 39° C. (102.2° F.) occurred, although for ten days before this there had been an almost normal temperature. The patient is still very anemic, but seems to be slowly improving in this respect and has gained somewhat in flesh and strength.

A blood-count made upon February 17th when the parasites were first found showed a reduction of the red cells to 2,970,000 and an increase of the white cells to 14,300 per cubic millimeter; and upon the following day at 3 p.m. the hemoglobin content was estimated at 57 per cent. The enumeration of the leucocytes at this examination showed the polynuclear and polymorphoneuclear elements to represent 90 per cent. of the total number, the large mononucleated, 2.4 per cent, the small mononucleated, 1.6 per cent., and the eosinophiles, 6 per cent.

Owing to the recent illness of the writer these observations have not been repeated; but several examinations of the blood have been made by Dr. J. T. Moore (to whom she is indebted for the

leucocyte-count just given) for malarial organisms, invariably without result.

The urine has been repeatedly examined by the writer and others and has always failed to show albumin, casts or other elements of special import.

MEDICAL PROGRESS.

Psychical Troubles in Paludism.—While writers on marsh fevers from the time of Hippocrates have time and again referred to the delirium which occurs in the course of such fevers, the abnormal psychical states associated with paludism have not been carefully studied until a comparatively recent date. The subject is carefully considered by J. P. CARDAMATIS (*Le Progrès Méd.*, Sept. 28, 1901) who distinguishes several classes of cases. The psychical troubles of paludism may be (*a*) psychonervous states occurring during the paroxysm of simple intermittent fever; (*b*) disorders occurring in the course of chronic paludism, either accompanying the febrile movements or manifesting themselves in the intervals; (*c*) psychical disturbances associated with remittent or pernicious fevers; (*d*) psychoses of malarial cachexia. It is not the malarial parasite, but the toxins produced by that factor, which constitute the direct pathogenic cause of the various nervous and mental symptoms. The psychoses in question may occur in any victim of the plasmodium, but they are most likely to attack individuals neuropathically disposed; paludium evidently is capable of awakening a morbid predisposition previously latent. Paludal delirium should be classed with other forms of toxic delirium, occurring in infectious diseases. According to the predisposition of the individual and the quantity of active toxin present, one of four degrees of intoxication is produced, namely, excitation, anesthesia, coma, paralysis. The psychoses of chronic paludism are rare, while the real cause of those which are said to occur long after the cure of the malarial condition proper is open to question.

Treatment of Asthma.—The cause of asthmatic attacks, according to G. R. JOHNSON (*Med. Times*, Oct., 1901) depends upon the arterial tension to a large extent and hence indirectly diet becomes an important factor in the treatment. Meats, soups and meat extracts should be avoided as poison, for they are rich in uric acid, which stimulates contraction of arteries. Milk, fruit and vegetables should compose a large part of the diet. A few successful therapeutic combinations are given:

℞ Potas. Iodid.....3iij
Ext. Bellad. Flu.....3j
Ext. Lobel. Flu.....3ij
Ext. Grindel. Flu.....ʒss
Glycerine } aa.....ʒiss
Aquæ }

M. et Sig.: Tablespoonful every two to four hours.

A good external application is:

Chloroform.....ʒss
Olei Terebinthinæ.....ʒi
Sprts. Rosmarini.....3iss

In the suffocative stages of asthma the following is recommended:

℞ Tinct. Lobeliæ.....ʒss
Tinct. Sanguinariæ.....ʒij
Olei Menth. Viridis.....ʒss
Syrupi Empyreumatici.....ʒv

Sig. Half teaspoonful every two hours.

Congenital Heart Disease.—Of 32 such lesions occurring in the practice of J. L. MORSE (*Archives of Pediatrics*, Oct., 1901), the diagnosis of patent foramen ovale was made in 6 cases, patent ductus arteriosus was presumed in 5 and defect in the ventricular septum in 6. In 17 the chief lesion was thought to be at the pulmonary valve. Two of the cases with patent foramen ovale were premature. One case had clubfeet, one was microcephalic, and one developed hydrocephalus. The sexes were about equal. The symptoms complained of were cyanosis in 17 cases, dyspnea in 6, cough in 5, convulsions in 2, edema in 1, and in 14 the lesion was discovered accidentally. Cyanosis was the most common symptom, others being recurrent attacks of severe dyspnea, convulsions, edema, and cough. None of the cases diagnosed as patent foramen ovale died. Six died of the heart disease at 3, 6, 8, 9, 10 and 12 months; 6 died of other diseases; 5 have passed successfully through measles, 8 through scarlatina, and two through whooping-cough.

Myeloma of the Spine with Compression of the Cord.—These tumors produce various symptoms, the most constant being pains in the chest, back and extremities; deformities; gradually increasing anemia. In a case observed by J. J. THOMAS (*Boston Med. and Surg. Jour.*, Oct. 3, 1901) there were symptoms due to pressure on the cord. At a late stage the gait was *spastic-ataxic;* Romberg's symptom was present; there was incoordination of the legs, slight disturbance of the sense of position, marked general paresis of the legs. The muscles reacted normally to the faradic current. The knee-jerks were equal and increased, and there was slight patellar clonus, and ankle clonus on both sides. The plantar, cremasteric, abdominal and epigastric reflexes were absent. The sense of pain and temperature was absent, that of touch diminished. A perusal of the literature shows that albumose was present in 11 of the 19 authentic cases that have been reported. Its presence should at least direct attention to the possibility of disease of the bones.

Gluten and Anti-Diabetic Foods.—An analysis was recently made of various food products sold under the name of gluten and diabetic foods with a view of determining whether any material change had been made from the ordinary

wheat and graham flours. H. C. Sherman and H. M. Burr (*N. Y. Med. Jour.*, Oct. 12, 1901) obtained twelve samples of such foods from various manufacturers and analyzed them most carefully. It was found that not half are noticeably higher in protein or lower in carbohydrate than the ordinary whole wheat flour, and many are scarcely better than white flour or bread. The best sample examined contained twice as much carbohydrate as protein.

Eye-Lesions of Syphilis.—Primary syphilis occasionally appears on the eyelid or conjunctiva, writes Frank Buller (*Montreal Med. Jour.*, Sept., 1901), and secondary syphilis gives a fair number of cases of iritis, but hereditary syphilis, and much more the tertiary stage of acquired syphilis cause most of the syphilitic eye lesions. The interstitial keratitis of hereditary syphilis is seldom treated as such by general practitioners and much harm is done. A true interstitial keratitis may also be a tertiary manifestation. Another specific keratitis is characterized by superficial and deep circumscribed, densely white opacities, very irritative but not tending to ulcerate or become vascular. Every form of specific keratitis is attended with a tendency to iritis. The important lesions are (1) simple plastic iritis, the most common; (2) nodular or gummatous iritis, absolutely pathognomonic, and occurring between six and nine months after the original infection; (3) iritis secondary to choroido-retinitis, indicated by opacity of the vitreous; (4) scleritis resembling the ordinary rheumatic form; (5) gummatous cyclitis, very rare; (6) violet retinitis and much opacity of the vitreous; (7) a milder, more chronic and often relapsing retinitis; (8) optic neuritis, mostly a descending neuritis, due to some coarse intracranial lesion, but sometimes purely local; (9) monocular irido-cycloplegia due to disease of the ciliary ganglion. To these may be added many paralyses of the extrinsic ocular muscles. With but few exceptions these recurring lesions followed long routine treatment by proto-iodide of mercury, varied at times by potassium iodide medication. The best general method of mercurialization is by inunction, though gray powder, vapor baths and hypodermic injections are also effective. The patients should always have tonics as well.

Multiple and Solitary Adenoma of Liver.—Adenoma of the liver is regarded as a congenital new growth by A. Engelhardt (*Deutsch. Archiv f. klin. Med.*, Bd. 63, Heft 1 *u.* 2). The condition presents no reliable diagnostic features. It is frequently associated with cirrhosis, the two pathological changes being independent results of a common cause. A case of multiple adenema with cirrhosis was observed by Engelhardt; clinically the picture was that of simple cirrhosis. The Caput Medusæ was well marked; the umbilical vein in the ligamentum teres remained patent. Thick, tortuous veins were developed on the surface of the liver; these were connected with the venous system of the parietal peritoneum and of the abdominal wall through the suspensory ligament. The liver was smaller than normally, and was studded with tumors of various sizes; these invaded the entire portal system, growing in the vascular walls; the hepatic vessels, arterial and venous, were absolutely free. Within the acini of the adenomata bile pigment was found. In certain areas necrobiotic changes had taken place within the cells. While hepatic adenomata were commonly described as having a poor vascular supply, the growths in this case were rich in capillaries both peripherally and centrally.

Bicycling: Its Indications and Contraindications.—By means of a gasometer attached to a bicycle the air expired by the rider has been collected for analysis, and the amount of energy liberated in the course of metabolism by this form of physiological exercise has thus been estimated. L. Zuntz (*Fortschritte d. Med.*, Sept. 22, 1901) shows that a rider who covers 15 kilometers in an hour liberates ten per cent. more energy than does a pedestrian who walks 6 kilometers in the same period; if the wheelman rides 21 kilometers the energy requirement is almost twice as great as that of the 6-kilometer pedestrian. Inasmuch as bicycling involves so extraordinary a consumption of energy and is accompanied by relatively slight sensations of fatigue, its place in the treatment of obesity would seem to be theoretically established. Like all active muscular exercise bicycling diminishes the quantity of sugar in the urine in diabetes. In slight degrees of anemia bicycling is of advantage as a stimulus to metabolism; in severe cases this form of exercise makes such demands upon the heart that it is contra-indicated. The use of the bicycle favors assimilation in chronic obstipation. Earlier literature contained frequent references to cases of inflammation of the knee-joint, said to be due to bicycling. Recently such cases have ceased to be reported, and it is probable that those originally cited related to individuals predisposed to arthritis. Faulty posture while riding no doubt leads to spinal deformity, and the danger of this result is especially to be guarded against in youthful riders. F. A. Schmidt goes so far as to advise that riding be forbidden to all children under twelve years of age. Many writers have recorded happy results from the adoption of wheeling by neurasthenics.

Lecithin in Tuberculosis.—The efficacy of lecithin in stimulating nutritive exchange has been scientifically demonstrated by Danilewski and Soromo, and later by Desgrez and Zaky. Gilbert and Fournier have shown that the administration of lecithin produces an increase of weight in cases of tuberculosis, neurasthenia and diabetes. The effects of lecithin in cases of tuberculosis are more satisfactorily shown by H. Claude and A. Zaky (*La Presse Méd.*, Sept. 28, 1901), who in their experimental and clinical studies gave special attention to urinalysis, not neglecting, however, to observe carefully changes

in body weight and in the general physical condition of the subjects of their experiments. They find that lecithin causes in tuberculous subjects a rapid modification in metabolism, which expresses itself by an immediate diminution in phosphorus elimination, and by a tendency to progressive elevation of the coefficient of nitrogen utilization. In subjects not in the last stages of chronic tuberculosis and not suffering from an extremely acute attack of the disease, the administration of lecithin produces promptly an increase of weight, stimulation of appetite, amelioration of the general condition. How far local lesions are affected is not shown, but in the opinion of the authors such lesions are modified as indicated by changes in physical signs. Lecithin is strongly recommended by these writers, if not as a specific, at least as an important adjuvant to other forms of treatment.

Gastrosuccorrhea or Reichmann's Disease.—Reichmann was the first to describe the continuous, spontaneous secretion, in the empty stomach, of a substance chemically and physiologically identical with the gastric juice which is ordinarily produced in response to physiological stimulation. A case of true Reichmann's disease is described by L. VON ALDOR (*Berl. klin. Woch.*, Sept. 30, 1901) who states that he has seen five such cases in all, carefully excluding, however, instances of symptomatic hypersecretion, such as is associated with hyperacidity and motor insufficiency. In these five cases the symptom-complex was at times so severe as to suggest the presence of malignant disease. Intense gastric pain occurred entirely independently of the taking of food; vomiting was frequent and copious, thirst excessive and constipation more or less stubborn in every case. The employment of the stomach tube and the careful investigation of the gastric function are indispensable in diagnosis. Characteristic features are (1) the presence of large quantities of gastric juice in the otherwise empty stomach; (2) the low specific gravity of the stomach contents; (3) the excessive acidity of the gastric juice obtained from the empty stomach as well as of that obtained after a test-meal—there is especially an excess of free hydrochloric acid, and to a less degree an excess of total acidity and of pepsin; (4) incomplete amylolysis due to excessive acidity. In Von Aldor's cases these objective findings persisted during periods when no subjective symptoms were present, indicating that the mere presence of the abnormal hyperacid secretion does not suffice to produce symptoms, the latter requiring in addition an abnormal irritability of the gastric mucous membrane. Treatment is most successful when belladonna preparations are used. While atropin is the most powerful agent known in the discouragement of gastric secretion, toleration is speedily acquired. Riegel's experiments have shown that morphine does not diminish gastric secretion at all but rather increases it; hence morphine must be avoided in these cases. While awaiting the physiological action of repeated small doses of atropin, the patient should be instructed to drink warm alkaline waters freely before and after meals. If with these measures we combine the daily administration of one or two drams of Carlsbad salts, lavage will rarely be necessary.

Hydrotherapy in Chronic Diseases.—Nowadays the methodical application of air, rest, exercise, diet and the internal and external use of water are important agencies in the removal of chronic diseases. Among these agencies water is regarded by S. BARUCH (*Boston Med. & Surg. Journ.*, Oct. 3, 1901) as the most indispensable because the most effective. Phthisis forms a striking illustration of the methods of hygienic treatment. The management now generally adopted in the best institutions combines the open air, dietetic and water treatment. Cold water has an irritant effect upon the sensory terminals in the skin; reflexly it causes deepening of respiration, improvement of the pulse, enhancement of glandular action and excretion, improvement of appetite, digestion and hematosis. By means of daily neurovascular training the patient's power of resistance is greatly enhanced. Neurasthenia has proved very amenable to hydriatic treatment. Exercise may be made an important curative factor in diabetes by stimulating the myolemma to utilize sugar. The great lassitude of the average diabetic precludes resort to exercise, but by judicious neurovascular training with cold douches lassitude is overcome. Cases of nervous dyspepsia are also fruitful for hydrotherapy after they have run the gamut from hot water and Salisbury steak to lavage. Charcot's success with cold douches in hysteria has been repeated by many others. Sciatica, neuritis and lumbago are greatly relieved and often removed by hot applications followed by cold douches. Angina pectoris being more frequently false than real, is often removable by hydrotherapy.

Effect of Climate on Nervous Diseases.—Therapeutic climatic results depend principally upon states of atmospheric pressure and the consequent nutritional improvement. F. S. PEARCE (*N. Y. Med. Jour.*, Oct. 5, 1901) says that functional diseases are more particularly influenced by climate. Great altitudes favor circulation in the periphery of the body and assist nutrition by increased absorption of nitrogen and by producing a more active circulation. A great altitude is not good for the neurasthenic who must appropriate nutriments slowly on account of the weakened central nervous system. Insomnia is benefited by lesser altitudes while chorea, hysteria and most of the functional maladies are benefited by life at the sea level. Melancholia and depressed states are helped by high winds and moderate heat. A greater altitude is desirable for diseases of central nervous system, a lesser altitude in cases of peripheral diseases.

Widal's Reaction in Children.—As the result of about 150 tests at the London Hospital for Sick Children, J. H. THURSFIELD (*Pediatrics*,

Oct. 15, 1901) finds (1) that in children's diseases a positive Widal reaction is evidence of the presence of typhoid fever; (2) that a negative reaction later than the tenth day is strong, but not absolute evidence of typhoid fever; (3) that repeated negative reactions are trustworthy evidence that the case is not typhoid.

An Obstetrical Outfit.—As an aseptic labor-bag, capable of holding everything necessary for a case, H. Judson Lipes (*Annals of Gyn. and Ped.*, Oct., 1901) uses a Rochester sterilizer, 16x6x6 inches, with two trays and canvas carrying case. In the lower tray are carried ether, alcohol, an alcoholic lamp, a canvas lithotomy sling, a 3-quart sterile douche-bag, chloroform inhaler and dropping-bottle, and forceps. The upper tray holds a Kelly-pad, operating-gown, rubber gloves, soap, brush, nail cleaner, bichloride tablets, ergot, acetic acid, boric acid, nitrate of silver solution, eye dropper, cord scissors, cord tape, needles, catgut sutures, silkworm-gut for perineal tears, scales, two artery clamps for grasping the cord instead of tying in case of emergency, a lisle-thread braided catheter, and a No. 22 English catheter with stylet for replacing cord, etc. If the case is far from home, he adds a rubber apron, scalpel and blunt bistoury, cranioclast, perforator, speculum, Barnes' bags, etc. If forceps or other instruments are needed, the sterilizer is quickly gotten ready and placed on a stove or over an alcohol lamp. Its lower part can be used for immersing the baby in asphyxia.

The Knot within the Lumen in Intestinal Surgery.—The possibility of introducing a proper intestinal suture without entering into the lumen of the gut is conceded by F. G. Connell (*Jour. Amer. Med. Assoc.*, Oct. 12, 1901), but this writer maintains that in locations other than the duodenum such an attempt is impracticable for the average surgeon. The importance of the submucous coat is recognized, but the difficulty of splitting its fibers is very great. If it is not included there is danger of yielding; if it is perforated the danger of capillarity presents itself. Connell prefers to run the lesser risk of capillarity and recommends a suture which includes all coats and is tied on the mucosa. The advantages claimed to be derived from penetrating all coats of the intestinal wall and placing the knot within the lumen are less danger of peritonitis through leakage at stitch-hole and no yielding of stitch. The suture material all passes away, leaving no foreign body. Diaphragm formation, an inevitable result of every method which adheres to the principle of seroserous apposition, is minimized and post-operative adhesions are greatly diminished.

Human Placentation.—Embryology is always instructive and at times of medico-legal importance, especially such features as pertain to placentation as indicating best the age of the fetus. The following are the latest observations of the second stage of human placenta-formation, according to C. Van Tussenbroeck (*Zeitschrift f. Geburtsh. u. Gyn.*, 1901, B. 45, H. 3): (1) The metamorphosis from the primitive to the discoid placenta occurs at or about the sixth month of gestation. (2) The necrosis of the decidua is the effect of mechanical pressure. (3) The reduction of the tufts on the part of the reflexa is in consequence of the obliteration of the spaces between the chorion and the reflexa. (4) The circulation in the vitelline membrane does not in man have any contact with the chorion. (5) At the sixth month when the transition to the discoidal placenta occurs, the decidua reflexa is totally obliterated. (6) The increase in the area of the placenta occurs by a displacement of the reduplication fold of the decidua reflexa. When the functions of the decidua are ended and the chorion has united with the decidua vera, the growth of the serotina occurs step-by-step with that of the uterine wall. (7) The cotyledons arise from the fact that the outer covering of the serotina offers an unequal resistance to the expansion of the fetal placenta. This resistance is greatest where the uteroplacental arteries run and make there rather fixed points. For this reason the arteries come to lie in the apex of the cotyledons or in the redundant part of the septa between the cotyledons, while the venous structures, being the less resistant, are found at their bases. This arrangement determines fixedly the direction of the placental blood-current. (8) The cortex of the tropoblast described by Siegenbeek Van Henkelom is easily recognizable in the half-developed placenta and distinguishable from the decidua upon which it rests. (9) The "stalk-tufts" (*Haftzotten*) are not in the decidua but in the cortex of the tropoblast. (10) The obliteration of the cell-layer of Langhans takes place by a pushing of these cells between the syncytium. This cell-layer appears to serve only in completing the tissue for the syncytium.

Cystitis, Pyelitis and Pyelonephritis in Women.—Medical literature scarcely affords a more complete account of clinical and bacteriological findings in cases of inflammation of the urinary tract in women, than is presented by T. R. Brown (*Johns Hopkins Hosp. Reports*, Vol. X., Nos. 1-2, 1901). The commonest cause of these infections in women is the bacillus coli communis, which sets up an acute inflammation without the aid of any other micro-organism. Other micro-organisms frequently found are the tubercle bacillus, various staphylococci and the bacillus proteus vulgaris. The proportion of cases due to the bacillus coli communis is greater in women than in men, probably owing to the proximity of the female urethra to the anus. Accessory etiological factors are anemia, malnutrition, trauma of and pressure on the bladder, congestion of the bladder and retention of urine. The bacteriological findings suggest certain therapeutic measures. The urine will probably be a poorer medium for the growth of bacteria, the lower the specific gravity and the less the amount of albumin and of urea present; hence water should be given in large amounts. This

treatment has the additional virtue of flushing out the kidneys and bladder and getting rid, as far as possible, of collections of purulent matter. Urotropin, cystogen, salol and similar antiseptics are of great value in acute infections, although of much less value where the condition has become chronic. If the urine be alkaline, administer substances tending to render it acid, as boracic, benzoic, or camphoric acid; while in those cases where the urine is acid alkalies should be given (as bicarbonate of soda or citrate of potash), the reason being that the urea-decomposing micro-organisms have their growth hindered by the pressure of an excess of acid, while micro-organisms which retain the acidity of the urine have their growth inhibited by an alkaline condition of urine. Correction of disorders of nutrition or digestion is important. Other useful measures are topical treatment, irrigations, instillations; operative treatment of various kinds may also be necessary.

Dilatation and Endometritis.—A logical and scientific parallel between abscess-cavities and discharging sinuses on the one hand and on the other hand simple chronic catarrhal or chronic purulent endometritis and obstructive dysmenorrhea is set forth by F. FRANKE (*Zeitschr. f. Geburtsh. u. Gynäk.*, 1901, B. 45, H. 3). In the former conditions the old surgical law is well established and obeyed, that free evacuation must be had and complete drainage maintained. In all the forms of endometritis free evacuation and complete drainage are the rational indications, because retention here means threatened or actual extension to the adnexa. In obstructive dysmenorrhea it is the very fact of the existence of an obstacle to the outflow of the blood and the clots which causes the pain. Franke seeks to apply the surgical law cited above to these gynecological conditions by inserting a rubber drain-tube into the uterine cavity well within the internal os, but not up to the fundus. Contact between the tube and the fundus, would result in troublesome contractions. After dilatation, which must be deliberately done, the tube is threaded over a sound and thus passed in. It is retained in situ by a couple of threads lightly caught in it and in the cervix uteri. Its bore must be free, to permit ready drainage, and its walls thick enough to be resistant. It can be retained in situ until the stitches cut through, under the usual precautions of antiseptic vaginal douches, and then replaced. Confinement to bed over the first few days is not essential. When a stenosis exists Franke resorts to twelve or fifteen small incisions around the entire periphery of the cervical canal, which permit of spreading without tearing and in healing are covered with mucous membrane, not scar-tissue and therefore do not contract again, perhaps to a higher degree than before the operation. In the cases he reports (two) results were permanent and without retrogression at the end of a year or more.

Tuberculous Rheumatism.—Various pseudorheumatic arthritic conditions are recognized in association with gonorrhea, scarlatina, typhoid fever, measles and diphtheria. Poncet proposed to classify as "tuberculous rheumatism" similar conditions due to tuberculosis. According to M. MAILLAND (*La Presse Med.*, Sept. 14, 1901), the term does not apply to ordinary cases of cold abscess in which the lesion is destructive, but relates to irritative conditions, of fibrinoplastic tendency, analogous to those of infectious pseudorheumatism, and clinically including forms which simulate every variety from simple arthralgia to complete ankylosis. The administration of salicylates is a waste of time in "tuberculous rheumatism." It should be remembered that in pseudorheumatic arthritis the maximum of pain is felt at the level of the joint itself, while in true rheumatism the painful spots are rather periarticular. In the presence of pseudorheumatism tuberculosis should be thought of, care being taken to exclude gonorrhea and acute infectious diseases as causative agents.

Otitis Media and Aphasia.—With the success of neurologists in fixing the various cerebral centers arises the relation between such centers and their connections on the one hand and on the other hand various diseases. No disease is any more significant than left otitis media purulenta, in the view of W. MERKENS (*Zeitsch. f. Chir.*, Aug., 1901), in its bearing upon speech-center disturbances. The chief considerations he sums up as follows: Abscess of the temporal lobe secondary to otitis media purulenta which causes speech-disturbances is only exceptionally a lesion of the true centers of speech. As a rule the interruption is only of the association fibers. First in frequency come those fibers which connect the sound-picture-center with the true perception-center. More rarely the break is between the sound-picture-center and the writing-center. The so-called optic aphasia belongs really under the head of psychical blindness and not to true aphasia, *i.e.*, speech-center disturbance. Temporal lobe abscesses often involve the life of the patient, hence early diagnosis and correct localization are essential. No symptom is more important than signs of aphasia, but these must be unmistakable in themselves and directly an issue of the disease. The surgeon must determine whether the speech difficulties began definitely with the other symptoms of the disease or were directly associated therewith. The first important feature is whether the patient can give undisturbed utterance to his own concepts and perceptions by always readily and precisely selecting and uttering the suitable words. This is most of all important with reference to the expression of his own subjective mental processes. Next, he must test the subject's understanding and reception of loudly spoken language. Finally he is concerned with the reception, understanding and expression of writing. If disturbances of the writing-center are present and especially if psychical blindness is associated with it the site of the abscess is probably rather posteriorly situated in the temporal lobes.

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No. 111 Fifth Avenue, New York.

Subscription Price, including postage in U. S. and Canada

Per Annum in Advance	$4.00
Single Copies	.10
With the American Journal of the Medical Sciences, Per Annum	7.50

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LEA BROTHERS & CO.,
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SATURDAY, OCTOBER 26, 1901.

THE SMALLPOX PROSPECT.

Recent reports of the United States Marine-Hospital Service show that, so far as smallpox is concerned, we are about to enter upon the colder weather in this country under unfavorable conditions. Smallpox is recognized generally as almost exclusively a winter disease. The advent of warm weather almost always brings with it a marked reduction in the epidemicity of the disease and often summer completely obliterates it even where it has been raging with special virulence. Whether cold actually fosters the growth of the smallpox germ, while warm weather inhibits it, can not be definitely determined until the microbic cause of the disease is isolated. There are those who insist that the real factor in the increased virulence of smallpox in winter depends on nothing more than the fact that the poor, among whom smallpox is especially prevalent, live closer together and with less ventilation in cold weather.

Ever since the Spanish-American War and, as pointed out by Dr. Nevins Hyde in a recent number of the *Popular Science Monthly*, as a direct consequence of it, we have not been without a disquieting number of smallpox cases in this country. Each winter for these last three years has seen the disease acquire virulent form. Each summer has seen considerable diminution of virulence. At the beginning of winter for three years past there have always been enough scattered foci of smallpox to insure the wide spread of the disease during the cold months. The reports of the disease for the present autumn, far from being exceptional in this respect, are distinctly alarming. The smallpox scare of last year led to the vaccination of a large part of the population, but the disease still finds susceptible subjects in abundance. In very few parts of the country do the Marine-Hospital statistics show a less number of cases during July, August and September than during the corresponding period of last year.

This incidence of smallpox is not localized in the parts of the country distant from large centers of population, where the absence of public health regulations and legal quarantine might be thought to account for the prevalence of the disease. New York, Massachusetts, Ohio and Indiana show the existence of a number of cases of the disease and most of them are situated in large cities. Wisconsin, Minnesota, Colorado and Kansas, on the other hand, report large numbers of cases mainly from country districts. Louisiana and Texas are the only two States that show notable decreases in the number of cases of smallpox reported since July 1, 1901, when compared with the corresponding period of last year. The total number of cases reported to the Marine-Hospital authorities for these last four months throughout the country is nearly 10,000. During the corresponding months of last year the total number of cases was only a little over 4,000. With the unfavorable weather just opening up the prospect thus disclosed is not pleasant. It is true that some of the cases that help to swell the total in these reports occurred before the summer months, but this does not impair the comparative significance of the totals for the corresponding periods of the two years. If the vastly smaller number of cases reported last year foreboded, as we stated at the time, a serious outlook for the winter months, then the latest reports are indeed ominous.

Not a few of our Eastern cities report smallpox even during very recent weeks. The danger should be frankly faced and the general population safeguarded. Now is scarcely the

time to discuss the value of vaccination. That has been proved according to the best judgment of the vast majority of the serious scientific medical men of the world. Every possible means should be taken to secure universal vaccination.

As to vaccine virus a word of warning seems necessary. Only vaccine material of recognized quality should be employed and the physician should assure himself as to its source and the grounds for considering it of genuine efficacy. There is no doubt that some of the opprobrium cast upon vaccination and some support of the pretention of its inability to protect against smallpox has been due to the use of inefficient vaccine material. Another word of warning as to the condition of the tenement-houses in densely populated centers seems called for. Here it is in the crowded living-rooms of the poor that smallpox finds its favorite breeding-place. Here it acquires during the cold days, when ventilation is sacrificed to warmth, the virulence that gives it power to spread even in the houses of the well-to-do. From here especially come the school-children and the workmen who distribute the disease to many others. Present conditions cannot be changed at once, though fortunately the trend of modern rational philanthropy is in the direction of fundamental reform, in this matter. Special vigilance, however, can secure if not immunity from the disease at least freedom to a great extent from its most serious dangers. Now that smallpox is known to be imminent it will be criminal if foci of it through medical oversight or carelessness of boards of health are allowed to develop to dangerous extent before being properly recognized and broken up. We earnestly trust that our own New York City Board of Health will prove itself more capable in this regard during the coming winter than during the past.

NEW YORK STATE MEDICAL ASSOCIATION.

The eighteenth annual meeting of the New York State Medical Association has continued the good work of recent years very creditably and has emphasized the renewed interest that the profession of New York City and State are taking in the local branch of the American Medical Association. To those who remember the small attendance at association meetings in Mott Memorial Hall only three years ago the present well attended sessions are a pleasant surprise.

This increased attendance deserves all the more to be a subject for congratulation as it doubtless portends the narrowing of the breach that has kept New York State from having and wielding her immense influence for the benefit of the medical profession in the national association.

The scientific program of the present session comprised some very interesting and practical features. Dr. Deaver's paper on appendiceal fistula with its warning that such unfortunate sequelæ are always due to delay in operating, aroused the usual discussion as to the possibility of ever treating the condition medically. It is evident that there are now but few even of general practitioners who have any confidence left in the power of remedial measures other than surgical to bring any lasting relief in appendiceal conditions. The symposium on cancer brought together a most interesting and suggestive collection of papers on this important subject. Dr. Blumer's review of the present status of the parasitic theory of cancer was a masterly bit of critical medical literature. Dr. Ewing's critique of statistics of cured cases of cancer that do not include details as to the previous clinical course of the tumor and the histological elements of which it was composed deserves widespread attention. The application of its suggestions would inaugurate a new and promising era in the clinical study of cancer. The symposium on arteriosclerosis presented very succinctly and practically the main features of an increasingly interesting condition.

In general the meeting was a very representative gathering of men of many minds in medicine. The program suffered somewhat in general interest perhaps because of the great preponderance of papers on surgical subjects. On this occasion of forty-eight papers a scant dozen were medical in character. The fault is of the times rather than the committee but its recognition and correction even to a limited degree would certainly be welcomed by the mass of attendants at medical meetings.

The dinner of the Association this year was made a very taking feature by an excellent toast list. The committee of arrangements deserves congratulations on their successful management of the details of the meeting. The association itself begins the new century with a very promising exhibit of union and strength.

RULERS AND THEIR MEDICAL ATTENDANTS.

"Uneasy lies the head that wears a crown." Uneasier still would seem to be the fate of those whom Fortune, with roseate promises of

fame and future success, picks out in emergencies to do surgical service for wounded or dying rulers. The experience of the last twenty years would justify a special invocation in the medical man's litany, "From attendance on persons in high political position, spare us, O Lord.'

The conditions in President Garfield's case were most sad. Only one of the attendants on the dying President is still alive. It does not seem too much to say that the lives of all of them were shortened by the worry of responsibility and the carping of popular misunderstanding. Their state of mind during their attendance on the President was anything but enviable. After his death their fees for service were disputed, criticized, delayed in Congress and finally paid most grudgingly. The practice of the chief attending physician was ruined and after a previous career, full of the greatest promise, he died almost in actual poverty.

The case of the Emperor Frederick of Germany, only a few years after President Garfield's death, was a repetition of the ungracious treatment of the medical men. There is no doubt that Sir Morel Mackenzie's life was shortened and its closing years tinged with bitterness because of the envious, contemptuous criticism that followed the Emperor's death. There were not wanting critics in France after President Carnot's death, a few years later, who did not hesitate to say that his life might have been saved or at least prolonged by more radical surgical intervention than was attempted. This, too, notwithstanding the fact that wounds of the liver, such as existed in President Carnot's case have always been considered as inevitably fatal.

It is not surprising, then, that the surgeons who attended our late President should be in no enviable position. The sad reflection with regard to all these cases is that the main part of the obloquy that falls upon inevitable results is due to the unthinking criticism of brother surgeons. Men who should realize sympathetically all the difficulties of the trying situation are the first to find fault with methods and details of treament of which everyone well knows they can understand very little at a distance. The critics are not so much the recognized quacks of surgical practice, for their opinion would have but little popular weight and no professional sting. It is supposedly reputable surgeons who assume an impossible omniscience *in distans*. Surely it is not too much to hope that progress in surgery and in culture, in ethical gentlemanliness and in brotherly fellowship will raise the medical profession above these lamentable persecuting methods. Medicine and even surgery, notwithstanding recent scientific advances, still remain arts and not true sciences in their practical applications. Failure of purpose, as the attainment of the ideal in any art, must remain inevitable under many circumstances. The last to condemn this sad incompetency of human effort should be those whose training fits them best to understand the liability to failure that the complexity of surgical and medical problems involves and whose personal experience has taught them that the most exhaustive knowledge of conditions does not guarantee against personal fallibility in what has been from earliest medical history and will remain the most difficult of all problems for the medical attendant—the question of prognosis.

The present lesson bears with it its weight of warning, however, not only for the medical attendants on those in high station, but for all however humble their conditions. There has always been and there persists a too great tendency to criticize "the other doctor" commonly on insufficient grounds. It is easy to criticize where all the conditions are not known and such criticism is not only unworthy but often eminently shallow and mistaken. The broader the mentality, the less the tendency to this thoughtless, merely carping criticism. Let us hope that the breath of culture that comes with more liberal education will bring an end to this undesirable state of affairs before the close of our generation.

A CHAIR OF SYPHILIS AND WHAT IT SHOULD MEAN IN OUR MEDICAL SCHOOLS.

Owing to the protean character of specific manifestations the habit of giving iodide and mercury "when in doubt" is very widespread among the profession. And it is probably better that several innocent persons should be mercurialized in this tentative fashion than that one luetic should be deprived of the benefit of specific remedies, but is it not a somewhat sad commentary on the so-called progress of medical science that the sum total of our knowledge regarding syphilis and its multiform lesions in skin and bone, viscera

and nerves, apparently is not sufficiently advanced to enable us at times to differentiate sharply between what is syphilitic and what is not?

Nearly every physician of even a few years' practice comes by hard experience to discover in what widely different ways the virus may make its presence known, but the acquisition of this knowledge involves the loss of valuable time and often the infliction of irreparable damage to the people who entrust themselves to his care. This infliction of damage we allege, of course, in a purely negative sense; referring to cases which, from ignorance merely, are allowed to progress from a frankly syphilitic to a para- or metasyphilitic—probably incurable—stage.

It sounds well to speak of tuberculosis and syphilis as the two great scourges of the human race, as in sad truth they are, but is there no better way to prepare men to cope with them than that now in vogue in our schools of medicine? With regard to syphilis we are decidedly of the opinion that there is.

The teaching of syphilis should not be a side issue in any medical curriculum. At present the student gets a little knowledge of it here, a little there and no very connected ideas of it anywhere. The avoidance of this not very praiseworthy condition of affairs calls for a concentration of knowledge. We suggest that the chair of syphilis should be exalted in our schools to the level and dignity of those which are now considered of paramount importance, and the man who would teach syphilis should know his subject root and branch. He should be as thoroughly familiar with its manifestations in brain and cord as in skin and bone, as a matter of fact—from the standpoint of importance—even more so.

To fill such a chair would require an exceptional type of mind, together with a peculiar training, and yet a kind of training that ought to appeal powerfully to a man who wished to advance the clinical side of medicine in a way fittingly analagous to that now adopted in pathology or bacteriology, for example.

Such a man must, to begin with, train his visualizing powers to a high degree, so that he may be able easily to evoke from his visual storehouse control pictures, so to speak, for contrast with what he has before his eyes in a given case. Furthermore, his knowledge of human nature must be intimate and far-reaching, his powers of observation nearly perfect. His preliminary clinical training should be general. With this he must acquire an intimate but selective knowledge of pathological processes, that is, a knowledge of the general and local workings of the poison of syphilis. And it goes without saying that his work in the pathological laboratory should cease only with his life's labors.

After his preliminary clinical training he should branch out into the at present somewhat narrow specialties of eye and ear, nose and throat, skin and nerves. From each of these he must glean everything which has an essential bearing upon his subject. To do this, time is the only requisite for the right man, and no greater time than we now give to the training of a pathologist or bacteriologist in the most limited sense of the terms.

With this broad training once attained, where can such a man find a place to put constantly into practise the knowledge he has acquired? Unfortunately we have no great hospital for syphilis like the St. Louis of Paris; and no city or general hospital could give to any one person the facilities which our ideally-trained man requires. In our judgment the most desirable places in the country for such practice are the great almshouses, many of which have already attained to the dignity of hospitals. Here one sees the scum of civilization, victims, to a large extent, of their own vices. Here syphilis flourishes and here it may be studied to the heart's content in every form under which it is known to make its hideous appearance.

It is in an institution of this sort that our professors of venereal disease should get their clinical experience, rather than in a dermatological out-patient department or in a surgical clinic.

Finally, when the happy time comes that the chair of syphilis is considered of tantamount importance to the others we have mentioned, and when it is occupied by a man trained as we have suggested, then and then only will students go away from our medical schools with an adequate appreciation of and ability to cope with a disease which, of all the ills the flesh is heir to, is the most virulent, insidious and deadly.

ECHOES AND NEWS.

NEW YORK.

Journal of Physical Therapeutics.—This new quarterly international review is to have an American editor in the person of Dr. Margaret A. Cleaves.

Electrotherapeutics.—This is the title of a new monthly journal to be devoted to the study of medical electricity and radiography. Dr. W. B. Snow is to be its editor.

The Craig Colony Prize for Original Research in Epilepsy.—Dr. Frederick Peterson of

New York offers a prize of $200 for the best original unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition. All manuscript should be submitted in English. The prize is open to universal competition. Each essay must be accompanied by a sealed envelope containing the name and address of the author and bearing upon the outside a motto or device, which is to be inscribed also upon the essay. All papers received will be submitted to a committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the Board of Managers of the Craig Colony, October 14, 1902. Manuscripts should be sent to Dr. Frederick Peterson, 4 West Fiftieth street, New York City, on or before September 30, 1902. The successful essay becomes the property of the Craig Colony and will be published in its medical reports.

New York Academy of Medicine.—On Monday evening, October 21st, the Section on Ophthalmology held its first regular meeting. Dr. J. E. Weeks exhibited specimens of neuroma of the retina. Dr. A. Schapringer presented a case of amblyopia from inhalation of wood alcohol and Dr. H. H. Seabrook, a case of a peculiar neoplasm of the bulbar conjunctiva.

On Wednesday, October 23rd, the Section on Laryngology and Rhinology met. Dr. H. Holbrook Curtis read a paper on the "Early Appearances of Laryngeal Tuberculosis."

On Thursday evening at the meeting of the Section on Obstetrics and Gynecology, Drs. S. Marx, L. T. Lazinski and A. Brothers, presented specimens. Dr. S. W. Bandler read a paper on the "Etiology, Histology and Usual Course of Ectopic Gestation." This was discussed by Drs. E. H. Grandin, Bache McE. Emmet, S. Marx and others. Dr. C. P. Noble of Philadelphia then read a paper on "Extra-Uterine Pregnancy."

The following candidates for resident fellowship in the Academy were recommended for election: Drs. Fielding Lewis Taylor and Anna Wessels Williams.

PHILADELPHIA.

Leper in the City.—The ailment of Wing Ting Sing, a Chinese laundryman, has been pronounced leprosy and he has been placed in the Municipal Hospital. The disease first manifested itself in July, but only lately was its true nature revealed.

Foreign Surgeon Entertained.—Dr. Ernest Laplace gave a dinner of twenty-six covers at the Art Club October 17th in honor of Dr. Henri Hartman, the noted Paris surgeon, who is visiting the clinics of this city. The guests included the prominent surgeons of the city.

Smallpox.—For the week ending October 19th there were 69 new cases and 10 deaths reported, an increase of 9 cases and 8 deaths over the previous week. Dr. Martin, a well-known physician of Frankford, is suffering from the disease. Camden is building a temporary municipal hospital, 20 by 70 feet in size, in which to care for smallpox patients.

News From the Colleges.—The attendance thus far at the University of Pennsylvania, Medical Department, is 537, a slight decrease from last year. The freshman class is larger, however, showing a gain of 22 per cent. The Department of Dentistry also shows a decreased attendance. The course is to be lengthened to four years. A gratifying fact is the increase in college graduates among the matriculates, fully one-third of the medical freshmen possessing degrees.—Jefferson at present has a registration of 640, a substantial decrease from last year's figures.

Obituary.—Dr. Charles H. Voorhees, who died October 19th from apoplexy, was for many years a practitioner at Flushing, Ohio, where his practice was worth $30,000 per year. Of late years he has been attending traveling invalids, which capacity brought him to this city about one year ago.

Indiscriminate State Aid to Charities.—A feature of the recent State Convention of the Directors of the Poor and Charities of Pennsylvania at Altoona was the address of Cadwallader Biddle, of this city, General Agent of the Board of Public Charities of Pennsylvania. After giving the early history of State aid for hospitals and the springing into existence of new institutions tempted by the bait of State aid, he said: "The most serious act of all was that passed in the last session of the Legislature, by which the State accepted the Lackawanna Hospital in Scranton as a State institution and assumed the entire cost of operating it. Already inquiries are being made from every section of the State asking how this was accomplished and intimating that at the next session similar acts will be introduced for very many of the existing institutions. What argument can be raised against this? If the State maintains a general hospital in one section, should it not do so everywhere? All its citizens should be treated alike. This is equally true of orphan societies, homes for friendless, etc." Mr. Biddle's remedy is to treat hospitals for the sick and injured as those for the insane. When they have not a sufficient income from private sources they should be allowed for each patient a fixed amount from the State. The theory that the State must become the mainstay of every charitable institution is extremely pernicious and misleading. The limit of abuse in the distribution of State favors to charitable institutions has been reached when those which are not receiving sufficient local support pass into the absolute ownership of the State.

Licensing Nurses.—In an editorial the *Press* states that the formation of State Nursing Councils, as urged by Mrs. Fenwick, is indispensably necessary. After mentioning the discrepancies in the length of course, entrance requirements, and methods of training in the various hospitals of the city and the injustice to patients and physicians caused by inadequate training, it says: "In time these things right

themselves, because the young women who are so unfortunate as to attempt a short cut into the work of nursing discover after a few years that, while the nominal pay is high, the time for which a nurse insufficiently equipped is wanted is so short that the average wage of such a nurse will be considerably less than that which she would earn behind a counter. But in nursing, as in medicine, the State ought to step in and provide a State Nursing Council and establish rigid qualifications which would give a license precisely as is done in medicine."

Death of a Pioneer Woman Physician.—Dr. Hannah E. Longshore, the first woman to practise medicine in this city, died October 18th at the age of eighty-three. She was one of the ten members of the first graduating class of the Woman's Medical College of Pennsylvania and was for a time demonstrator of anatomy in that institution. When she put out her sign as a medical practitioner she met with sneers and ridicule. Male physicians refused to consult with her, druggists refused to fill her prescriptions, and teachers in the public schools instructed their pupils not to walk with Miss Longshore "because her mother was a 'woman doctor.'" But her practice increased to such an extent that after forty years of activity she retired with a modest fortune, it being said that her practice was larger, with one exception, than that of any other woman physician in the United States.

CHICAGO.

Diphtheria.—The spread of diphtheria in the Humboldt Park district still continues, but the diphtheria mortality remains remarkably low, owing, it is believed, to the general and intelligent use of the antitoxin by Chicago physicians.

Officers of the Chicago Gynecological Society.—At a meeting of this Society, held October 18, 1901, the following officers were elected: President, Dr. L. E. Frankenthal; First Vice-President, Dr. A. H. Ferguson; Second Vice-President, Dr. Junius C. Hoag; Secretary, Dr. William H. Rumpf; Treasurer, Dr. Emil Ries; Pathologist, Dr. M. L. Harris; Editor, Dr. Charles S. Bacon.

Chicago Surgical Society.—At the annual meeting, held October 17th, the following officers were elected: President, Dr. Christian Fenger; Vice-President, Dr. John B. Murphy; Secretary, Dr. A. E. Halstead; Treasurer, Dr. D. N. Eisendrath; Council, Drs. E. Wyllys Andrews, John B. Murphy, and L. L. McArthur.

Chicago Medical Society.—At a meeting held October 16th, Dr. William J. Butler showed an interesting case of congenital heart lesion in a boy, seven years of age. The apex of the heart was seen while the child was in the erect position in the fifth interspace, inside and extending to the mamillary line. Palpation confirmed this location of the apex, and one feels not only the heart impulse, but also a systolic thrill which becomes more pronounced toward the base, reaching the maximum in the third interspace over the second rib and in the second interspace close to the sternum. On percussion the upper border of the heart begins in a relative dulness in the second interspace, which becomes absolute from the fourth rib. The right border of the heart is found two fingers' breadth to the right sternal border. On auscultation from apex toward the base a loud, rasping systolic murmur is heard obscuring the first sound. This murmur reaches its greatest intensity in the third interspace over the second rib, and in the second interspace to the left of the sternum, coinciding perfectly with the localization of the systolic thrill. The murmur is transmitted in every direction and heard over the back. The second sound is distinctly heard over the entire heart. The most interesting feature of the case, and the one which would, without examination, cause doubt as to the diagnosis made, is the absence of cyanosis. The author is convinced that cyanosis is not a necessary factor in the diagnosis of such cases. The author has seen six congenital heart lesions in the past five years. The three first cases were all pulmonary stenosis. One of them was intensely cyanotic. Another suffered from chronic stasis, and presented a cyanotic icteroid hue. The third case was a pale-faced girl of seventeen years. The mucosæ were slightly cyanotic. Of the cases seen here, one was a mitral and aortic lesion, the postmortem examination having been made by Dr. Hektoen, and the case reported by Dr. Cotton. The other two, of which this is one, were pulmonary stenosis. The first case was a pale-faced lad of eleven years, who appeared at the clinic two years ago. This boy died later. A postmortem examination was made and confirmed the clinical diagnosis.

Fears the Spread of Smallpox.—Chief Medical Inspector Heman Spalding is watching the development of smallpox in the outlying towns. He has made personal visits to Michigan City, Ind., and Harvey, Ill., where the disease exists, and has secured the cooperation of authorities in those towns to prevent its spread. Health Commissioner Reynolds fears some trouble with smallpox this winter, because of its prevalence throughout the country. He is therefore taking all possible precautions to prevent its advent in Chicago.

To Examine the Brain of Frank Collier.—It is said that pathologists throughout the country, as well as anthropologists and the medical profession generally, are awaiting with special interest the examination of the brain of the late Frank Howard Collier, the attorney whose death at the Cook County Hospital last August followed several years of intermittent attacks of insanity, traced to a blow on the head received during a political campaign. The brain will be examined by Drs. Ludwig Hektoen, E. C. Fortner, E. R. Le Count, and E. M. Brown. It is now in the laboratory of Rush Medical College, and the result of the examination will be announced at as early a date as practicable. Professor Starr, the anthropologist of the Uni-

versity of Chicago, will also watch the investigation, and make a report in regard to the case.

To Lay Cornerstone of Hospital.—There were elaborate exercises and a great parade of Catholic societies Sunday, October 20th, at the laying of the cornerstone of St. Anne's Hospital, an institution for consumptives to be erected by the Sisters of St. Elizabeth's Hospital. We have already referred to this hospital in previous issues of the MEDICAL NEWS. When completed, the hospital will cost $150,000. Although it is built by Catholics, patients of any religion will be admitted to its wards, and if unable to pay a fee the treatment will be gratuitous. Bishop Muldoon officiated at the exercises.

Surgery of Pulmonary Abscess, Gangrene and Bronchiectases Following Pneumonia.—At a meeting of the Chicago Medical Society, held October 9th, Dr. Daniel N. Eisendrath contributed a paper on this subject. After going into the literature in a very exhaustive manner, he drew the following conclusions: (1) Both acute and pulmonary abscess and gangrene following pneumonia may develop immediately, and chronic and simple putrid abscesses, with or without bronchiectases, are more remote sequelæ of both croupous and influenzal pneumonia. (2) The most valuable points in the history are the etiology; the sudden expectoration after an apparent crisis of pure non-odorous pus in the simple abscess cases, or of fetid pus in the gangrenous variety. In the chronic cases there is usually a history of a pneumonia having preceded the condition at some considerable time previously, followed by expectoration of large quantities of pus, with exacerbations of fever, accompanied by emaciation and frequently clubbed fingers, etc. (3) Signs of cavity are seldom present. The moist râles, especially of large metallic character, are the most reliable physical signs. The character of the sputum is also of great value, whether purulent or fetid. Elastic fibers are more frequently found in gangrene than in abscess, being comparatively rare in the latter. (4) The X-ray is only of confirmatory value, as it shows chiefly thickened areas of lung, and should not be absolutely relied upon. When it shows a shadow at the same point where the physical signs are present, it is of value. (5) The prognosis of abscess and gangrene following pneumonia, medically treated, is not very favorable. Many cases of both varieties can be successfully treated in a surgical manner by pneumotomy. One of the greatest difficulties is the exact localization of the focus. The statistics which I have gathered show a marked increase in the percentage of recoveries, especially in the cases which have been reported within the last five years, over that of the preceding five or even ten years. The prognosis for the chronic cases is not so favorable. The patients are usually operated upon when in an emaciated condition, and the walls of the cavity are often rigid, so that they do not contract well after being drained, and the free communication of a bronchus with such cavities is also a great barrier. But statistics in this variety are also improving, especially when combined with excision of the affected portion of the lung.

Typhoid in Chicago.—The weekly bulletin of the City Health Department, issued October 14th, calls attention to the unusual prevalence of typhoid fever throughout the country. Commissioner Reynolds urges increased caution in diet and in the use of untreated hydrant water by the young and non-immune, and calls upon physicians to have the diagnosis of the disease confirmed by bacterial examinations in the department laboratory. These examinations, he states, will be made and reported upon promptly by telephone without charge. Typhoid fever is more prevalent in Chicago than it has been at any previous time since the Health Department began to make records. The record here shows that the typhoid mortality for the past three months is four times what it was during the corresponding quarter last year. In the record of typhoid mortality, Chicago for the third quarter of the (July, August, and September) year shows an increase of 273 per cent. over that of the first six months. The average autumnal increase in this region is about 70 per cent., so that Chicago's full increase this year is very nearly four times greater than usual. There is no obvious local cause during the third quarter for this excessive increase. It is true that the first six months of 1901 were dryer than usual. Up to the close of June there had been 5.4 inches less rain than the average since 1871, and the ground water was correspondingly lowered. But it is not yet conclusively proved that the stage of the ground water affects the prevalence of typhoid, and it is less likely that it should do so in Chicago, with its water supply direct from the lake. Finally, the exhaustive studies of the department fail to reveal any connection between this increase and either the milk or the ice supply of the city.

Chicago Academy of Medicine.—At a meeting, held October 11th, Dr. W. G. Stearns reported an interesting case of fracture of the inner table of the occipital bone with cerebral concussion and contusion involving the base of the temporo-sphenoidal and frontal lobes. Dr. L. E. Schmidt spoke on the necessity of a clear diagnosis in operations on the prostate.

GENERAL.

Medical Society of City Hospital Alumni, St. Louis.—The Society met in the amphitheater of the City Hospital Thursday, October 17th. The following papers were read: The Bladder in Its Relation to Pelvic and Abdominal Surgery, by T. C. Witherspoon; Report of a Case of Appendicitis in a Patient Having Transposed Viscera, by W. C. Mardorf.

Malaria and Cancer.—According to press despatches, injections of malarial blood as a cure for cancer are proposed by Professor Frederick Loeffler. Finding that amid trop-

ical conditions most conducive to malaria cancer is of extreme rarity, he was led to the conclusion that when malaria is administered as a therapeutic it acts as a antidote to cancerous disease. What he calls the remarkable infrequence of cancer among negroes in the United States and other African populations is cited as one of the chief supports for his theory. In an interview he is reported to have said: "Realizing that malaria is capable not only of infecting the human system, but occasionally of counteracting the ravages of other diseases, the idea occurred to me of attacking cancer by the aid of malarial poison. It is established that malaria, when artificially produced by hypodermic or internal injections of the blood of malarial patients, can be arrested by prompt administration of quinine. Accordingly, I suggest the inoculation of cancerous persons either with mosquito poison or the blood of patients afflicted by other malarial infections. Previous attempts to cure cancer through vaccination with infectious substances have not only been crowned with little success, but have been accompanied by great danger, because of inability to control the antidote. In tropical lands where malaria flourishes cancer is seldom known."

Curious Death.—The doctors in Vienna, according to the daily press, have been made interested in the case of a young man, twenty-three years old, who has just died after a six months' painful illness, which puzzled the physicians, including German specialists. Shortly before his death his ailment was diagnosed as the result of the hatching of eggs of a blue bottle fly, which the patient had swallowed, causing perforation of the intestines. The sufferer was then too weak to undergo an operation. An autopsy confirmed the diagnosis. Part of the large intestine was riddled.

Ohio Valley Medical Association.—The following invitation is given by this society:

> "'The time has come, the doctor said,
> To talk of many things:
> Of bugs and bones and cases rare,
> Of babes and other things.'

"Know All Ye Disciples of Esculapius by These Presents:

"That on the eleventh and twelfth days of the eleventh month, in the year one thousand and nine hundred and something or other, in the city of Henderson, State of Mint Julips, otherwise known as old Kaintuck, on the banks of the Ohio, and near several other Banks, there will be convened an assembly of practising doctors, that is, they are always ready to practice, *nolens volens*, at the bar, table, or at the bedside: whether it be to help make the issuance of Leah's fruitful womb painless, or to demonstrate the dissection of spring chickens; and as the story goes, they will meet together for the purpose of mutual pleasure and improvement. We purpose to have a good program on subjects of scientific nature, by practical physicians, who have toiled through the Wilderness of Endeavor, toward the Promised Land of Success.

"It was the historian Froude who wrote, 'The knowledge that a man can use is the only real knowledge; the only knowledge that has life and growth in it and converts itself into practical power. The rest hangs like dust about the brain or dries like raindrops off the stones.' The object of the founders of this Association was to create a live, practical organization of working physicians. The success of their effort has been proven in the past three years, for Know Ye, by this Greeting, that this Association is now in its third or tertiary stage, having been delivered at Sturgis, Union county, Kentucky, in August, 1898, and has now merged from twenty members to nearly two hundred. Has passed through the stage adolescence, and on the 13th of May, 1901, was raised to the third degree, and ordained, specified, rechristianed the "Ohio Valley Medical Association." You are cordially invited to attend and take part in the proceedings."

Ohio Valley Medical Association.—Partial program is as follows: Treatment of Pneumonia, Douglas C. Ramsey, M.D., Mt. Vernon, Ind.; Modern Surgery of the Gall Bladder, by H. Preston Sights, M.D., Paducah, Ky.; Clinical Microscopy, Its Value and Limitations in Private Practice, by Charles W. Hartloff, M.D., Evansville, Ind.; Plastic Surgery of the Face, by M. F. Coomes, M.D., Louisville, Ky.; Puerperal Convulsions, by T. J. Townsend, M.D., Owensboro, Ky.; A Few Things I Know, by Henry T. Dixon, M.D., Evansville, Ind.; The Endometrium, J. A. Humphrey, M.D., Henderson, Ky.; Treatment of Infected Wounds of the Hand, by Horace Whitacre, M.D., Cincinnati, Ohio; Carcinoma of the Breast, by Robt. H. Moss, M.D., Niagara, Ky.; Inguinal Hernia: Bassini's Operation for Radical Cure: Report of Cases, by W. A. Quinn, M.D., Henderson, Ky.; A Further Study of Strontium Salts, by Leon L. Solomon, M.D., Louisville, Ky.; Medical Treatment During Period of Adolescence, by S. S. Amerson, Sullivan, Ky.; On Pediatrics, by C. C. Lewis, M.D., Owensboro, Ky.; A Few Practical Points on the Diagnosis and Treatment of Syphilis, with Lantern Slide Illustrations, by M. L. Heidingsfeld, M.D., Cincinnati, Ohio; A Plan of Campaign, by W. J. J. Paris, M.D., Marion, Ky.; The Use of Normal Salt Solution, by C. H. Todd, M.D., Owensboro, Ky.

Assistant Surgeon at the Freedmen's Hospital.—The United States Civil-Service Commission invites attention to the fact that the examination announced for October 29-30, 1901, to be held in any city in the United States where postal free delivery has been established, for the position of assistant surgeon at the Freedmen's Hospital, is postponed to November 12-13. (See MEDICAL NEWS, Sept. 28, p. 508.)

Longevity in the United States.—In line with a recent editorial on "Longevity and Life Insurance" in the MEDICAL NEWS, an editorial analysis of the recent Census Bureau Statistics given in the *New York Tribune* is of interest. "A bulletin has just been issued by the United States Census Bureau in which a comparison is made between the death-rates in this country for 1890 and 1900, and it may be confidently asserted that few statistics published by that branch of the government possess such a gratifying character. It appears that there was a falling off of nearly 10 per cent. in the proportion of deaths to population during the last decade of the century just ended, while the average age at which Americans now die is put at 35.2 years, as against 31.1 in 1890. A gain in longevity of 13 per cent is here indicated. At first the announcement seems a little incredible. The figures hold good, however, only for cities of eight thousand inhabitants or more, and hence are in one sense partial. It is doubtful if the improvement has been so rapid in the rural regions. Still, if the conditions of city life are here accurately represented there is certainly occasion for profound congratulation.

"Analysis of the bulletin here referred to shows, moreover, that 'the great white plague,' which for so many years claimed more victims than any other malady, no longer stands at the head of the list. The death-rate from consumption was 245.4 for every 10,000 persons in 1890 and only 190.5 in 1900. No other disease shows such a great falling off, although diphtheria and bronchitis, cholera infantum and the diarrheal disorders of adults, general debility and typhoid fever, closely approach it. For most of these changes it is easy to find some explanation in the improved sanitation of cities and greater painstaking with food and water supplies. But other influences have unquestionably operated in two instances. Consumption is now dealt with more effectively than ever before, because the fact that it is often curable is recognized. And Behring's antitoxin, which is scarcely ten years old, perceptibly restricts the ravages of diphtheria.

"Unfortunately, however, there are a few maladies which show an increased mortality. From pneumonia there were 191.9 deaths among every 10,000 people in 1900 and only 186.9 in 1890. The difference is slight, but it is sufficient to put this disease slightly ahead of consumption as a destroyer of human life. Here again it is not hard to find a reason for the change. It is scarcely a dozen years since what is now known as influenza invaded this country. The census bulletin shows that the deaths directly assigned to it rose from 6.2 in 1890 to 23.9 in 1900. But the effects did not stop there. Pneumonia is one of the most common sequels of the grip, and often begins its demands on a patient's vitality when the latter is already pretty well exhausted. Thus the chances of recovery are materially diminished. But for this new complication it is possible that pneumonia, like consumption, diphtheria and bronchitis, would show an appreciable falling off in its havoc.

"The other maladies the death-rate for which has grown to a notable degree are cancer, apoplexy and derangements of the heart and kidneys. So imperfectly is the origin of the first of these ills understood that it is difficult to conjecture why its activity has been enlarged. But one cannot avoid regarding the increased proportion of deaths from the other causes here referred to as indications that the high pressure life of cities is proving more exacting than ever before. Business and social demands, excitement of one form or another, high living and lack of exercise work out their legitimate results in spite of the best efforts of the doctors. Nor will the best of general sanitary measures make any difference with these particular disorders. Evidently if any check is to be put upon mortality from them the people must apply it themselves."

Gen. Sternberg's Report.—Surgeon-Gen. Sternberg, in his annual report to the Secretary of War, makes the following observation among others on the health of the army: "The health of the army must be regarded as having been unusually good during the calendar year 1900. The admission rate for all causes in the army, volunteers and regulars, with a mean strength of 100,389 in 1900, was 2,311.81 per 1,000 of strength, as compared with 2,178.06 in the previous year; but during the year 1899 only 39,280 men out of a total of 105,546 were serving in the Philippines, while during the past year 66,882 of a total of 100,389 were thus serving. This is an important point to remember in considering the sick rates of the two years. The death-rate in China was large, 47.76 per 1,000 of strength, 23.62 from disease, and 24.14 from injury. From the close of the calendar year 1900 to the latest reports, the health of the troops in the Philippines had been steadily improving. Smallpox, so prevalent and deadly in the early occupation of the islands, has been almost entirely suppressed. Dysentery, constituting 13.44 per cent. of all cases of sickness, is the dangerous disease. The health of the troops serving in Cuba was excellent during the year. The medical record of the troops in Porto Rico for the year 1900 is an excellent one, comparing favorably with that of troops serving at the home stations. Referring to alcoholism in the army, Gen. Sternberg says: "The steady decrease of late years in the admissions for alcoholism among the men of the Regular army is a matter for congratulation. Military officers may be said to be unanimous in their opinion that this was mainly the result of the establishment of a post exchange, or canteen, at military posts. There is less drunkenness among troops in active service than in a command doing garrison duty in time of peace. In the Philippines during the past year the admission rate for alcoholism among the volunteers was 8.68, and for regulars 12.41; for troops in China, 7.70. These statistics do not sustain

the newspaper reports of drunkenness among the troops in the Philippines. In fact, medical officers report the habits of the enlisted men in the Philippines as very much the same as in the United States." Dr. Sternberg is to be congratulated on this full and vigorous report.

Obituary.—Dr. Henry R. Rogers, one of Dunkirk's most prominent citizens and the oldest physician in Chautauqua County, N. Y., died at at his home in Dunkirk last week after a short illness. Dr. Rogers was born in Winslow, Me., in 1822, and was a graduate of the Jefferson College in Philadelphia. He became distinguished for his scientific investigations and his original views of matter and the laws which govern it have attracted the attention of scientific men. His theory was that all physical phenomena, without exception, are transformations of electrical energy. His articles on astronomy and physics have had a wide circulation both in the United States and Europe and have provoked much discussion. He was a member of the Chautauqua County Historical Society, the New York State Medical Society, the American Medical Association and the American Association for the Advancement of Science. He abandoned the medical profession some years ago to devote all his time to literary work.

Dr. Joseph Sanders died at Oil City, Pa., last week at the home of his sister, from typhoid fever. He was thirty-four years old. He was graduated in 1892 from Bellevue Hospital Medical College, and then studied at Heidelberg, Berlin, Vienna and Leipsic, where he made a specialty of the diseases of the nose, ear and throat. Since 1895 he had practised in New York, and at various times was officially connected with Bellevue Hospital and the New York University. At the time of his death he was assistant chief of the Nose, Throat and Ear Dispensary of Mount Sinai Hospital. He was a member of the Academy of Medicine, County Medical Society, and the German Medical Society, of this city.

Charles Henry Brown, M.D., for many years managing editor of the *Journal of Nervous and Mental Diseases*, the official organ of the American Neurological Association, and the New York, Philadelphia, and Chicago Neurological Societies, died October 15, 1901, in New York City. Dr. Brown was born in New York June 18, 1856, and has always been a resident of this city. He was a graduate of New York University, class of '79, in which he took the highest honors. Dr. Brown was a son of Dr. Henry Weeks Brown, who died in 1864, and a grandson of Dr. Stephen Brown, a well-known physician of early days in New York, a contemporary of Dr. Alfred Post and Martyn Paine. During his life Dr. Brown was connected with the New York Dispensary, the Post-Graduate, and the Presbyterian Hospitals and the outdoor work of Bellevue Hospital. He was a member of the New York Academy of Medicine, the County Medical Society, the American Neurological Society, and the New York Neurological Society. He had been a member of a number of the most prominent societies in the city. He is survived by a widow and two daughters.

CORRESPONDENCE.

THE ROCKEFELLER INSTITUTE.

To the Editor of the MEDICAL NEWS:

DEAR SIR: The Milk Commission of the Medical Society of the County of New York regret that in the report recently published a wrong impression was inadvertently conveyed which, in justice to the Rockefeller Institute and to themselves, they would like to correct. The Milk Commission during the past year has interested the dealers and the medical profession in certified pure milk, and in the furtherance of its aims has been permitted to use certain data gathered by special workers of the Rockefeller Institute in pursuit of an independent investigation of a wider scope which the Institute has undertaken. The data gathered for the Institute which the Milk Commission especially made use of in the report referred to was in part bacteriological; while the results of farm investigations and the observations indicating the co-relation of improved sanitary conditions of the dairies with improvement in the character of the milk were derived almost wholly from an investigation, as yet unfinished, which is being carried on by Dr. Belcher, under the auspices of the Rockefeller Institute.

HENRY DWIGHT CHAPIN, M.D.;
WALTER LESTER CARR, M.D.;
ABRAHAM JACOBI, M.D.;
JOSEPH E. WINTERS, M.D.

October 24, 1901.

TRANSACTIONS OF FOREIGN SOCIETIES.

German.

ABSCESS OF THE ANTRUM OF HIGHMORE—RAPID RECOVERY FROM ECLAMPSIA.

HERSCHEL, at the Verein der Aerzte in Halle A. S., June 5, 1901, read an exhausitve contribution on the subject of purulent inflammations of the antrum of Highmore. Anatomically the wall of the nasal cavities (outwardly) and of the antrums (inwardly) are identical and the hiatus semilunaris has two layers of mucous membrane, one on each bone surface and continuous one with the other. This arrangement accounts for the ready frequency with which this hiatus closes. Zuckerkandl found in fully ten per cent. of all cases that auxillary communications between the nose and the maxillary sinus are present. This fact must also be borne in mind in etiological and therapeutic considerations. Excepting occasionally pure trauma as the cause of disease at this point, all of the inferior diseases may present it as a complication, especially croupous pneumonia, typhoid fever, diphtheria, scarlatina, measles, influenza. Any ordinary

severe acute nasopharyngitis may extend directly into it and then pus supervene. Bacteriologically, all the germs characteristic of the above diseases have been found abundantly in the pus, and in addition streptococci in relation to facial erysipelas. Since erysipelas of the face commonly begins in lesions about the nose, it is fair to assume that in such cases it is the primary disease. Mechanically, these processes either extend directly or infectious material is forced into the antrum by hard blowing. Tooth-fangs may actually project into it or by a very delicate septum be separated from it. In either case a suppurating root may quickly infect the cavity. The processes are either acute or chronic catarrhal, and acute and chronic purulent inflammation, each with its own usual lesions and exudates. A hyperplastic type of the disease is also found, which may go on to the formation of cysts. In the more favorable purulent cases, the exudate is a muco-purulent one, in the less promising it is purely purulent which would go always with profound changes in the mucosa, such as polypi, cysts, ulcers, bone-caries, etc. Zuckerkandl claims that he has found true bone-changes far more rare than most rhinologists represent. Bone-plaques have been found in the cavity produced by a chronic periostitis and very likely the origin of the osteomata found in this cavity have at times the same origin. Rare but still rather common are profound bone-changes with necrosis and sequestration. The symptom complex is really most variable. Fever occurs with the acute disease and with exacerbations of the chronic form. Pain sharp and lancinating or dull and heavy is usually present, seated over the frontal process of the bone or in some of the teeth and due to irritation of the infra-orbital nerve. Occasionally by radiation and reference the supra-orbital nerve shows pain and one might think of empyema of the corresponding frontal sinus. In chronic purulent inflammation, we have the pain duller and usually more extended. Whether any causal relation exists between such inflammation and migraine is still not determined. Hyposmia and perversions and hallucinations of smell occur. The crucial symptom is the flow of pus especially forward out of the nostrils, usually colored with blood, intermittent or almost constant in flow, commonly fluid, often forming dirty scabs. Sometimes polypi change its course backward into the pharynx, or it reaches there through various auxiliary foramina. Thence the upper and later the whole respiratory tract may become involved and also the digestive apparatus. Ordinary sequelæ of the pus-flow are ulcers of the nasal mucosa, eczema of the skin about the nose, and later a putrid ozena with its usual scabs and scales. Later as ultimate nasal lesions we have hypertrophic rhinitic with the formation of polypi, especially about the bulla ethmoidalis and the processus uncinatus. Various minor and major, chiefly reflex disturbances of breathing have been seen, and twice in literature an obstinate drowsiness, yielding only to evacuation of the pus, have been reported. In the diagnosis of this disease it must not be forgotten that frontal headache may be due to it as well as to trouble in the frontal sinuses. Likewise in the so-called nervous headaches the cause may lie entirely in the antrum. The crucial symptom is of course the dribbling of pus into the middle fossa of the nose, namely the frontal sinus through its infundibulum, the antrum of Highmore through its foramen maxillare, and the anterior ethmoid cells. When the pus dribbles from the frontal sinus, as a rule its flow is most abundant when the head is held in the upright position. At this moment the foramen maxillare is the highest point, with reference to its floor. As soon as the head is bent far forward exactly the reverse occurs. The pus flows rapidly out of the antrum, but remains held in the sinus, because the foramen of the antrum becomes its lowest point and because the mouth of the infundibulum becomes its highest point. The best test for diagnosis is to drive a trochar and cannula through the nasal wall of the antrum close to the flow of the nose and then aspirate. Caution must be taken not to use too much force and drive the instrument out in to the cheek. When this accident occurs, as a rule healing without complications occurs. As a rare anatomical anomaly the antrum may be divided into an anterior and a posterior half. If one be empty and the other full of pus, aspiration will often then fail to find pus. The translucency test must never be forgotten, objectively it gives a loss of light in the affected cheek and subjectively the patient perceives no light on the same side. Expective treatment rests entirely with ice in local application and attention to the various symptoms. Carious teeth must always be removed. The nasal douche cautiously applied will keep the nose clean. When radical measures are needed, aspiration or other means of evacuation must be undertaken. The best are (1) through the osteum maxillare or any of the accessory foramina, (2) drilling through the alveolar margin in the socket of the second bicuspid or first molar tooth, (3) exposure of and entrance through the fossa canina.

SOCIETY PROCEEDINGS.

NEW YORK STATE MEDICAL ASSOCIATION.

Eighteenth Annual Meeting, Held at the New York Academy of Medicine, October 21, 22, 23 and 24, 1901.

First Day—October 21st.

Business Meeting.

The principal business was the election of officers for the ensuing year. The following gentlemen were elected: President, A. A. Hubbell of Buffalo; Vice-President, W. H. Biggam of Brooklyn; Secretary, Guy Lombard of New

York City; Treasurer, E. H. Squibb of Brooklyn; Chairman of Committee of Arrangement, Irving S. Haynes of New York City; Chairman of Committee on Legislation, E. E. Harris of New York City; Chairman of Committee on Library, J. W. S. Gouley of New York City; Chairman of Committee on Public Health and Medical Charities, Alexander Lambert of New York City; Chairman of Committee on Publication, Dr. J. Riddle Goffe of New York City; Delegates to American Medical Association: E. E. Harris of New York City; E. D. Ferguson of Troy; C. A. Wall of Buffalo; Chas. E. Quimby of New York City; H. O. Arrowsmith of Brooklyn.

SECOND DAY—OCTOBER 22D.

The *President*, John A. Wyeth, M.D., *in the Chair.*

Osteitis of Knee.—Dr. Wisner R. Townsend of New York City read the first paper, the subject of which was the correction of deformities following this condition. Dr. Townsend said that 50 per cent. of the cases of osteitis are followed by deformity where careful treatment is not pursued. The question is how to avoid the enormous number of almost useless limbs. All surgeons are agreed that there is no necessity for its occurrence, and that it is due either to faulty treatment, on the part of the surgeon, or failure of the patient to carry out the surgeon's direction. The amount of motion in a cured case will vary, but under the modern protective plan, the latest and best treatment, 95 per cent. of the patients should recover with useful and not unsightly limbs.

Subluxation of Tibia.—There are two conditions that cause deformity and useless limbs. These are subluxation of the tibia and another group composed of different complications. The principal complications are knock-knee, bow-legs and genu-recurvatum. For the treatment of subluxation of the tibia, the application of Billroth's splint is a very useful method, but it succeeds only in skilled hands. By the application of properly-directed pressure with section of the hamstring tendons correction of this condition can be accomplished gradually but successfully.

Ankylosis.—Where ankylotic conditions exist these may be broken up under narcosis, and then if they recur, as is not unusual, the limb will be in better position. Where ankylosis is broken up, however, the surgeon must be very careful to put up the limb in an absolutely correct position. For the treatment of ankylosis, excision is very rarely required. Osteotomy is a much more satisfactory operation. It produces less shock, because it does not inflict much injury on already diseased tissues and for the same reason it is followed by rapid healing. The small skin incision required gives very little chance for the development of sepsis. The manipulations required for the operation are not extensive, and this is also a preventive of septic complications. The failure to remove any portion of the bone does not give opportunity so usual in excision for interference with subsequent growth. The liability to bending, especially backward, common after excision, is also avoided.

Technic of Osteotomy.—The osteotome wound should only be of sufficient width to admit the instrument, which, as a rule, is less than one-half an inch across. The cutaneous incision for this purpose should be made longitudinally, and after the periosteum has been pierced the osteotome can be inserted and twisted around in such a way as to make the osteotomy on a horizontal axis. While excision destroys all possible hope of future motion in the joint, osteotomy leaves the possibility of a reasonably good joint with satisfactory motion.

Illustrative Cases.—Dr. Townsend gave details of two cases recently under his care. The first was a boy of sixteen suffering from marked genu-recurvatum. The bending back at the knee had begun about a year after excision of the joint, because of tuberculous arthritis and osteitis. A subcutaneous osteotomy was done and forcible straightening under ether was accomplished. The boy recovered with a good leg that continues to be useful and presents comparatively little shortening despite the previous excision. In the second case there was some subluxation of the tibia and flexion of the leg to an angle of 90 degrees. At first an attempt was made to straighten the leg under ether, but this did not succeed. A subsequent attempt succeeded to the extent of making the angular deformity only 125 degrees. Later the leg was straightened to 140 degrees. Finally a subcutaneous osteotomy was done with a straightening to 180 degrees. There is now very little difference in the length of the limbs and the patient is able to use the leg very satisfactorily.

Appendiceal Fistula.—Dr. John B. Deaver of Philadelphia said that this sequela of operation for appendicitis is an extremely important one. Its occurrence is always very annoying to the patient and detrimental to the credit of the attending physician and surgeon. It is besides not without its dangers and the means of avoiding it are extremely important. Its prevention would be easy if patients were operated on in the early hours of attack of appendicitis. If cases were presented for operation sufficiently early no fistula would exist. It is hard to understand why medical men insist on delaying operations in appendicitis cases, since there is more danger, not only at the time of operation, but also because of the sequelæ that are liable to develop if operation is done late.

External and Internal Fistulæ.—Fistulæ may be divided into two groups, external and internal. The latter group includes all those cases in which some means of communication is formed between the appendix and its broken-

down detritus and a hollow abdominal viscus, or, the more rare cases, in which there is a communication between the thorax and evacuation of the contents through the bronchial tubes. The most common internal fistulæ are those of the intestine. Fistulous connections with the ureter or bladder are, however, common enough not be unfamiliar. Internal fistulæ are rare as compared to external fistulæ. They also very rarely need surgical interference.

Intestinal Fistulæ.—It is sometimes thought that the fistulous connections between appendiceal abscesses and loops of the intestine form a not unfavorable termination of a case of appendicitis. There was a time when medical men looked upon this as a triumph of Nature's effort to cure the disease. As we have more carefully followed cases of appendicitis we have learned to realize that in these cases of intestinal evacuation of the abscess there are not infrequently subsequent symptoms of indigestion extremely obstinate to treatment, that are evidently due to the presence of this fistulous connection with a purulent focus. Undoubtedly, too, the adhesions which form because of the chronic inflammatory condition present furnish opportunity for the development of obstruction of the bowel. Dr. Deaver is sure that these old chronic sites of inflammatory disturbance often form the nidus in which cancer develops.

External Fistulæ.—These may be divided into two classes, fecal and non-fecal fistulæ. Through the non-fecal fistulæ there escape urine, pus, bile, or mucus. Urinary fistulæ in connection with appendiceal operations are usually due to some connection with the ureter. It is rather easy for this organ to become involved in the appendiceal condition at the point where it crosses the psoas muscle and so lies just beneath the appendix. Fistulæ discharging urine may, however, occur as the result of the ulceration of a suppurative appendix after adhesions of the bladder have formed. This will occur, of course, in cases where the appendix lies in the pelvis. In other cases, where the general direction of the appendix is towards the liver, the tip of the organ may contract adhesions to the gall-bladder. When suppuration or gangrene occurs, the gall-bladder may become involved and a true biliary fistula result.

Purulent and Mucous Fistulæ.—Where pus or mucus continues to come from a fistula there are usually some foreign bodies present as the exciting cause for the secretion. This foreign body may be the appendix itself, which has sloughed off during the acute process, but has not been discharged when the abscess was opened. As a matter of fact it is usually illusory to promise one's self that the appendix will slough away entirely under these circumstances.

Cause of Mucous Fistulæ.—Persistent mucous discharge from a fistulous tract will often be found to be due to the presence of a suture left during the operation or to some threads of gauze or other absorbable material that may be present. At times the basis of the fistulous discharge seems to be a microscopical opening into the lumen of the intestine. This is not large enough to permit of the passage of material amounts of the intestinal contents. There is not sufficient gas nor infectious material to give a distinctly fecal character to the fistulous discharge. There is, however, sufficient communication to keep up an irritative subinflammatory condition that renders the fistulæ permanent.

Fecal Fistulæ.—If all the contents of the bowel find their way through the opening left after an appendiceal operation, the patient is really suffering all the inconveniences of an artificial anus. If the opening into the intestines be high up in the small intestine, an amount of biliary matter may be discharged into the intestinal contents and this will prove very irritating to the skin. If the connection is with the lower bowel, very frequently the fistula will heal spontaneously. These ulcerative openings into the intestine are Nature's attempts to cure appendicitis, but Dr. Deaver has much less confidence in Nature than in the surgeon's knife.

Injury of Serous Coat.—Some of the fecal fistulæ that result are due to careless handling of the bowel during appendiceal operations. If, in the course of freeing adhesions, there occurs a tear in the serous coat of the bowel, this will frequently lead to a fecal fistula. The intestine derives most of its nourishment through the serous coat and the lessened nutrition at the point of injury, with infectious material on both sides of it, will almost surely lead to ulceration.

Treatment of Fistulæ.—Many of the fistulæ heal spontaneously if given a chance. The rule, then, is always to wait a reasonable time so as to allow Nature's therapeutic efforts to have their opportunity. There is one exception, however, to this rule. If the fistula has a connection in the upper part of jejunum then the nutrition suffers so much that an attempt must be made at once to close the fistula. Dr. Deaver has had a patient in whom the taking of milk was followed in five minutes by its appearance in the fistulous discharge. In order to encourage the healing of a fistula food should be given in concentrated form, so as to make the feces solid. Liquid material leads to a perpetuation of the fistulous opening. As a rule, no purgative should be given and the lower bowel should be cleared out by means of injections. These should not be given under pressure sufficient to appear at the fistulous opening.

Operative Interference.—It is important that the opening of a fistula should be made equal to the cavity which it drains at its widest

part. Some time this free opening permits of drainage and healing from the bottom. Where further operative interference is necessary the surgeon should cut wide of the fistula and work toward it, segregating the infected segment of bowel so as to avoid the development of peritonitis. As a rule, if the repair of the bowel would lessen its caliber very much, it is better to excise a portion of it. The severed ends should be brought together by suture, anastomosis being brought about without any chemical aid. Needle and thread are sufficient and these are always at hand.

Multiple Fistulæ.—It is important as a rule in operating for fistulæ to look for other openings into the bowel. A thoroughly successful excision of a portion of the bowel may be rendered entirely futile by the presence of another opening in the bowel which remained undiscovered at the time of the first operation. In these operations drainage is usually needed, though sometimes the surgeon may have confidence enough in the asepticity of the site of operation to close the abdomen thoroughly.

Prevention of Appendiceal Fistulæ.—The prophylaxis of these serious sequelæ depends entirely on the earlier recognition of acute appendicitis by the medical practitioner and the application of surgery to the case. When early operation is done no peri-appendicular inflammation develops, there is no involvement of the intestines nor of the bladder, ureter nor gall-bladder. Where these complications are not present it is practically impossible for the fistulæ to occur. A time will doubtless come when the medical profession will realize that it is almost criminal to allow a case to run until there is the possibility of such fistulæ developing as the result of negligence and timorousness in making the diagnosis.

Discussion.—In discussing Dr. Deaver's paper Dr. Delancey Rochester of Buffalo said that the most important thing with regard to appendiceal fistula is its prevention by early operation. This does away with all danger of complications and sequelæ. There is no medical treatment of appendicitis that is of any avail. Dr. Rochester used to consider that opium did good. He once reported five cases of appendicitis cured by means of opium. All five of these cases have since been operated on in recurrent attacks of appendicitis, and one of them has died as the result of complications due to adhesions that formed during the suppurative process in the region of the appendix. In a recent case under his care the parents refused operation when he advised it, and then he used the morphine treatment with some success. Later on the child developed appendicitis with some complicating peritonitis, and after the abscess was drained a fistula remained. This fistula did not develop for nearly three months after the original operation. When the appendiceal region was incised the appendix was found free in the abscess cavity and four perforations were found in it that showed how intense had been the inflammatory process.

Immediate Operation.—Dr. Rochester used to be an advocate of the morphine treatment for acute appendicitis in order to allow of interval operations. He does not any longer consider that this is good medical advice. As soon as the diagnosis is made surgical intervention should be advised. Only in cases where the family decline operation should the morphine treatment be applied.

Use of Morphine Stupid.—Dr. F. H. Wiggin of New York said that the stupid use of morphine in appendicitis cases should be stopped entirely. The morphine only serves to cover up the symptoms, and, if the patient is tided over an attack, the result is only the development of the complications from which fistulæ form when operation has finally to be done. Patients should be allowed to bear some pain, and when morphine is administered the family should be warned that, though the patient will be more comfortable, the condition is really more dangerous.

Opening of Abscess.—The mere opening of an abscess is not an operation for appendicitis and should not be so called. It is always unsurgical to open an appendiceal abscess and do nothing further. All diseased tissues should be removed in these cases, the abscess cavity freely flushed out with hydrozone and the general peritoneal cavity flushed with saline solution. Portions of necrotic tissue should be picked off with the fingers wherever possible. After thorough flushing there is no need of drainage. The abdominal cavity may be closed, just as if there had been no septic condition. It may sometimes be necessary to remove a few stitches, but this is a simple matter, and the direct closure of the abdomen will in most cases prevent the danger of subsequent hernia.

Large Abscesses.—Even if two or three pints of pus are taken from a large abscess it is not sufficient merely to drain it. The appendix should be carefully looked for and all remnants of it removed. Recently Dr. Wiggin was called to see a case of a very large abscess in a child in which so much pus was present that he feared there might be retention of urine, and he asked for the passage of a catheter before he was sure of his diagnosis. In this case during the operation Dr. Wiggin broke up all adhesions and found two other collections of pus, completely shut off from the largest abscess cavity. These would inevitably have been left and would have made the operation a failure if the usual timid method was followed. Besides these collections of pus, a large concretion was found. Dr. Wiggin did so much tearing of adhesions that the attending physician and the anesthetist feared for the result, but the child recovered completely.

Injections into Fistulæ.—Dr. Wiggin con-

siders it foolish as a rule to inject material into fistula for long periods. This is part of the old routine treatment that should be abandoned. As soon as the secretion ceases to be purulent and becomes merely mucus the outside of the fistula should be kept clean, the lower bowel should be kept empty and concentrated food should be given with the idea of making the feces solid. The fistula will heal better this way than by meddlesome interference with antiseptic washes.

Anomalous Cases.—Dr. Ferguson of Troy said that he had two recent cases of great interest because of the possibilities they provided with regard to subsequent fistulæ. In one case there had been trouble in the appendicular regions for several years. Finally an operation was undertaken and proved to be very intricate. The adhesions were broken up without serious injury to the bowel. No vestige of the appendix could be found though the site where it had been was still visible. After considerable search the naturally amputated organ was found three or four inches away from the bowel and fastened to the mesentery by adhesions. A fistulous tract connecting it with the colonic region was found and traced with a probe. Drainage was used in this case and later a hernia developed. This, however, has been cured by radical operation.

In a recent case Dr. Ferguson found a woman nearly moribund. He merely opened the abscess and she at once began to improve. A fistula remained, however, and it was concluded that the stump of the appendix was causing the trouble. At a second operation this was removed, but still the fistula did not close. A third operation had to be done in which over an inch of the distal part of the appendix was found buried in adhesions not far from the hepatic flexure of the colon and three or four inches away from the original site of the appendix. These difficult and trying cases show what constant surprises meet the surgeon in the abdominal cavity and also make clear that each case must be treated individually and not according to any cut and dried method.

Pre-Appendicitis Operations.—Dr. Richard Gibbons of Scranton said that operations for appendicitis should really not be necessary. The appendix should be removed before the diseased process had gone on to the stage of inflammation. A great change has come over medical opinion with regard to appendicitis in recent years, and we must go still farther. When the great eye surgeon Agnew died from appendicitis, although under the care of Sands and McBurney, the other great Agnew said to Dr. Gibbons, "The surgeon must wait in appendicitis for the formation of adhesions." This is just what surgical experience since then has taught us that we must not do. Just as in the question of suppuration in the middle ear, we do not wait for the development of mastoiditis, but incise the ear drum before it occurs, so, as soon as appendiceal colic occurs the appendix should be removed. The condition is easy to diagnose, and for its radical treatment it needs only a little knife and a needle and thread.

Immediate Operation.—Dr. Parker Syms of New York said that it is sometimes claimed that 80 per cent. of appendicitis cases recover without operations. This is, however, a very superficial view of the matter. Most of the recovered cases afterward have attacks which are either fatal or require difficult operations. Eighty per cent. is not encouraging in statistics of recovery since it means an awful mortality of 20 per cent.

Symposium on Malignant Growths.

Cancers and Infectious and Inflammatory Processes.—Dr. Albert E. Woehnert of Buffalo said that in many ways cancer cases resemble infectious and inflammatory processes. The kidney symptoms are distinctly similar. Dr. Osler pointed out that in 25 per cent. of cancer cases there are albumin and casts in the urine. In another 25 per cent. there is albumin alone. Only 50 per cent. are negative from the standpoint of kidney manifestations. Other observers have found a lessened amount of solids and uria in the urine. Still others have shown the presence of indican. These also are urinary manifestations of infectious disease.

Toxemia.—The toxemia present in cancer cases resembles that seen in infectious processes. This may of itself produce death. The coma that develops as the result of cancer toxemia is not unlike that of diabetes. The general condition in cancer cachexia resembles the prostration of a general infection. There is the fetid breath, the coated tongue, the anorexia, and the diarrhea.

Parasites in Cancer.—Dr. George Blumer of Albany reviewed this subject very thoroughly. He said that in most infections the proof of the contagious nature of the disease is either direct or indirect. Direct evidence is found by inoculation. Indirect evidence by infection of those who are collected together in certain neighborhoods. If distinct inoculation were possible we should expect to find many cases of association of cancer of the penis and cancer of the uterus. This does occur, but so rarely that it is evidently only a coincidence. Parts of tumors have been transplanted to other parts of patients' bodies, but very rarely. Some such inoculations, however, have been reported to be successful. Inoculation into other persons has been necessarily rare. In one experiment five persons were inoculated with cancer juice, but without success. The evidence in animals has confirmed the idea of the transmissibility of cancer. Cancroid of the vulva of white rats has been transferred by inoculation to the tunica vaginalis of other animals. Inoculability, however, does not prove infec-

tiousness, otherwise the transplantation of skin would seem to show infective power in skin-grafts. The evidence is not complete.

Recent Parasites.—In recent years the literature of the parasites in cancer has become enormous. Three forms particularly have been described, coccidia, yeast and rhizopods. The coccidial period received its principal confirmation from the coccidial tumors which occur in rabbits. Usually the parasites described have been intracellular bodies, sometimes containing a nucleus, at times striated, and these bodies push the nucleus of the cell aside. Some of the discoverers have described the multiplication of these so-called parasites by means of spores. Others have described sickle-shaped bodies. San Felice and Roncali thought that they discovered yeast-cells in cancer. As a matter of fact, however, anything round and apparently having a capsule has been considered by these observers as a blastomycyte.

Many of the appearances found in cancer cells and thought to be parasites can be explained as areas of degeneration within the cell or as leucocytes that have wandered into the cell, or as manifestations of endogenous cell-formation. Recently Borell has shown that practically all the appearances that were supposed to show the presence of parasites can be explained as abnormal conditions of the centrosome in the new formation of cells in cancer-cells. This seems to furnish a complete explanation of many mysterious experiences and Borell's illustrations show how well and how carefully the work has been done. Leyden recently described an ameba found in the ascitic fluid of an abdomen in which cancer of the omentum existed. This could not be connected, however, directly with the cancer. All recent work points to the fact that any organism that may exist in cancer does not grow on any ordinary culture medium. Organisms that have been found were really due to chance contamination. Certain evidence collected of late rehabilitates some of the old arguments with regard to the possible infectious nature of cancer. A German observer showed recently that in a town of 3,000 inhabitants cancer occurred only in definite locations. There were two suburbs to the town, an eastern and a western. No cancer cases occurred in the western suburb; practically all the cancer cases occurred in the eastern suburb, a few being in the eastern end of the town proper. All the cases occurred in houses situated on a sort of creek or ditch. In this ditch the inhabitants had the habit of washing the vegetables that they consumed. Most of the cases of cancer occurred in the liver and stomach.

Buffalo Evidence.—A careful inspection of the mortality statistics shows that in Buffalo, where cancer is especially frequent, certain wards have many more cases of cancer than others. These wards are principally inhabited by Germans and Poles, who suffer five times as frequently from malignant disease as the inhabitants of other parts of the city. Among these people cancer of the stomach occurs ten times more frequently than is the average in the rest of the population. It would seem then that something in their diet favors the development of cancer. These statistics would lead one to suspect parasitic nature of cancer. The material is, however, too small for a definite conclusion in the matter. A careful collection of clinical material in this matter will undoubtedly bring us precious information and the collection of such clinical material only requires the co-operation of intelligent physicians throughout the country to make it of immense value.

Intrathoracic Growths. — Dr. Alexander Lambert of New York said that these are nearly always malignant. A few dermoid cysts, fibromata and echinococcus cysts occur. In the pleura malignant neoplasms are usually secondary to growths elsewhere and the existence of a cancer focus elsewhere is the best diagnostic element in a doubtful case of obscure intrathoracic symptoms pointing to pleural involvement. They cause either effusion or a dry pleurisy. In cancer cases the pleuritic exudate is hemorrhagic. The differential diagnosis from tuberculosis is not easy. The absence of tubercle bacilli or of characteristic tuberculous cells or the presence of cancer-cells may help to the decision. In the lung, primary cancer predominates over secondary growths. Carcinoma is seven times more frequent than sarcoma. It occurs by preference on the right and in the upper lobe. It may be nodular in form and spread over the lung so as to simulate miliary tuberculosis. Cancer of the lung may cause swelling of one side of the thorax.

Lung Cancer Symptoms.—The symptoms are increasing dyspnea and pain for which the ordinary pulmonary condition can be found. There is apt to be a characteristic sputum. This is called raspberry or currant juice sputum from its color and general appearance. The diagnosis in cases of diffuse cancer of the lung is not easy. The differential signs from tuberculosis are the less amount of expectoration and the lower febrile course of the temperature.

Mediastinal Growths.—These used to be thought mainly cancerous in character. Recent statistics, however, show that sarcomata occur more frequently. There usually are signs of vascular compression with these growths, and sometimes of nervous irritation or paralysis from pressure. Irritation of the recurrent laryngeal nerve may cause a brassy cough and other symptoms simulating aneurism. Percussion usually shows a dulness under the sternum and extending on both sides of the sternum, but asymetrically. There is often a paroxysmal cough not unlike whoop-

ing-cough. This is almost pathognomonic of mediastinal tumor. At times the tumor grows very large and produces diffuse dulness to percussion. These large tumors are usually lymphosarcomatous in character. As a rule the limits of the tumor can be readily mapped out by percussion, because the lung resonance helps the diagnosis. The boundary of the percussion dulness is often a sinuous line.

Cancer Statistics.—Dr. James Ewing, of New York, called attention to the great discrepancies in the statistics of the results of operations for cancer in the hands of various operators. To take only the one form of cancer of the breast, within the last year or two one surgeon has been reported to have had as high as forty per cent. of recoveries without recurrences for over three years. These were set down as radical cures. A careful operator here in New York at a large hospital says that not more than three per cent. to 5 per cent. of his patients fail to have recurrences. Needless to say the greatest care is taken to make the operation include as far as possible all infected tissue. A prominent surgeon says that he has never had a cancer of the uterus that failed to return. In 80 cases of carcinoma of the larynx operated upon, all but one had recurrences. The question then arises, Is there really such a thing as radical operation for cancer?

Pathological Considerations.—So far cancer operation statistics have been made practically entirely without the co-operation of the pathologist. Certain terms as alveolar or adenocarcinoma have been employed in describing these tumors, but their meaning has been very loosely applied. We are coming to the realization now that the histological structure of the malignant neoplasm rather than any special technic or completeness of the operation is the important factor in the prognosis of operated cancer cases. Certain well-recognized forms of cancer are almost sure to return no matter what the extent of the operation. Others show very little tendency to recur even when the operation seems conspicuously incomplete and even to invite recurrence.

Mammary Cancer Classification.—Cancer springs from many tissues in the breast, from the skin, the alveoli, the lacteal ducts, the endothelium, etc. An attempt at the classification of the malignant tumors of various origin according to their malignancy seems desirable. Those that have their origin in the skin of the breast are distinctly less malignant than any other cancers of the mammary gland. The most common form of this type of cancer is the simple epithelioma. Involvement of lymph-glands takes place very late in the disease and not until ulceration has taken place with consequent provision of the opportunity for the epithelial cells to reach the lymph-ducts. At times there is an anaplasia of the epithelial cells and more rapid invasion of the lymph-glands, but even these forms of cancer are not difficult to cure completely and radically. The danger of recurrence if all apparently infected tissue is removed is very little.

Paget's Disease.—This form of malignant disease of the breast is really cutaneous epithelioma. It is essentially skin cancer, and though in the course of time it may invade the lacteal ducts it should never be difficult to cure. If the affected tissue is all removed it should not recur. Dr. Ewing has seen recently a specimen from an operated case of Paget's disease in which the incision had been made through the affected tissues. Needless to say there was under the circumstances inevitably immediate recurrence in the scar of the operation wound. Such cases are not rare for the Paget's disease often extends beyond the apparent tumor in the breast, and at times beyond even the suspicious appearances on the external skin.

Clinical Course of Carcinomata.—The age and the rapidity of growth of a given tumor provide the best elements for its prognosis. It is much more important for the surgeon to state in making his report of the case that the tumor has been of slow or rapid growth before operation than to tell its size and the amount of involvement of gland that it had caused. As a rule the so-called reticular carcinomata are not very malignant, do not grow very rapidly and show no very marked tendency to recurrence.

Adeno-Carcinomata.—These forms of malignant tumor are always limited in their invasion and their removal is, as a rule, followed by true radical cure. It is not unusual for the surgeon to remove a so-called adenoma and for the pathologist to find there scattered islets of carcinomatous tissue. This is then added to the list of cancers removed by the surgeon and without due reason goes to swell the number of cured cases. Adenocarcinoma is not infrequent during the milk-giving period and while it often causes considerable annoyance to the patient it is usually not malignant and does not recur. The good rule to remove all tumors that occur in the breast leads to its removal. It sometimes does degenerate malignantly, and so its removal is advisable.

Pure Carcinomata.—These malignant tumors come from two sources, the true milk-secreting cells, or the lining cells of the ducts. When composed of the lining cells of the ducts, these carcinomata often retain a certain amount of at least simulated tubular structure. The cells arrange themselves in cylindrical groups, as if they still lined conducting tubes. This is one of the most diffuse form of cancer and is very malignant. It can be recognized even in atypical specimens, because it presents no evidence of milk-making. Occasionally the presence of the cancerous nodules irritates the secreting cells of the breast, and so there are some scattered manifestations of colostrum. These are, however, not typical enough to make us think that the gland-cells themselves are involved.

True Alveolar Cancer.—These malignant tumors come from the true secreting cells. The tumors abound in colostrum corpuscles and their evidence is of value as showing the fundamental

cells of the new growth. This form of cancer is also extremely malignant. The nests of cancer-cells grow with more or less of lumen, and in the spaces thus formed colostrum is found. Of the two forms of true cancer, the alveolar and the duct carcinomata, the greater malignancy belongs, perhaps, to the latter.

Insidious Carcinomata.—Malignant tumors which spring from the lining cells of the lacteal ducts are often most insidious in their course. They often do not produce a definite tumor and they may not grow rapidly. The lymph-glands will often be tightly distended with metastatic cancer-cells, before the tumor in the breast has given any serious evidence of its presence by pain or discomfort, or even been called to the patient's attention by the presence of a hard portion in the organ. There is often a capsule present and this protects the skin from invasion, but does not prohibit the entrance of cancer elements into the lymphatics.

Malignancy and Prognosis.—True carcinomata are most malignant when they occur during the period of lactation. When the essential elements of the gland take on a neoplastic process during the active period of function, they are especially liable to obtain abundant nourishment and consequently to grow very rapidly. Such tumors particularly are apt to be followed by recurrences, and it is by these that surgical cancer statistics are spoiled. It is only, however, when the surgeon gives the details of the age of the patient, the clinical course of the tumor and the morphology of the histological elements that compose it, that his statistics are of true service in judging of the results obtained by surgical intervention. There is in this matter an important field for clinical observers and for the collection of clinical material that will be of great benefit to our knowledge of cancer and its curability.

Caustics in Cancer.—Dr. A. R. Robinson of New York spoke of the use of caustics in the treatment of carcinomatous growths. They are especially useful in the treatment of carcinomata of the skin. Epitheliomata are divided into three forms. The superficial, or discoid, the deep, and the papillomatous. As a matter of fact, however, there is no hard and fast line between these forms. It must be borne in mind that the apparent limit of a skin cancer is never its true end. Always beyond the periphery of the apparent tumor there are cancer-cells in the tissue that must be destroyed when any effort at removal is made or the cancer will surely recur. As a matter of fact, any interference with a malignant tumor that does not destroy all the cancer-cells in the vicinity is apt to produce hyperemia and an inflammatory reaction with lowered resistive vitality of the normal tissues, which thus puts the cancer-cells in the best condition for growing rapidly. This makes the prognosis worse than before.

Forms of Caustics.—It is evident that the ideal in the treatment of cancer is the removal of all the malignant elements. This can be accomplished either by the knife or by any other destructive process. Cancer never diffuses itself regularly. On one or more sides of the tumor there may be little or no extension, while on the other side, the growth may extend widely beyond the apparent limits. In order to remove with the knife, therefore, the cut must be made deeply into healthy tissue. On the face, this is productive of very serious deformity. Caustics, therefore, can be used to destroy just sufficient tissue, the operation being watched very carefully and thus there is less disfigurement. Zinc chloride has been used for this purpose, and when combined with cocaine may be employed without pain, but it has no advantage over the knife, since it produces too much loss of tissue. Caustic potash may be employed with very good effect. After its application the slough is removed and another application of the caustic made. After its employment there is an intense inflammatory edematous condition in the tissues surrounding the tumor. In this zone of inflammatory disturbance the circulation is retarded, certain tox-albumins develop as the result of the lowered vitality in the part and these tend to destroy cancer-cells that may be present even at a distance from the malignant growth itself. In certain respects this form of treatment is ideal, and can almost be said to be selective in action, destroying the neoplastic cells much more than the true tissue cells of the part. A still better caustic, however—because of its well-marked tendency to selective action—is arsenious acid. It does not seem to act as a chemical, but as a devitalizing agent and picks out particularly the neoplastic cells, for its work of devitalization. Dr. Robinson does not think that more than one in twenty of the epitheliomata of the face need to be treated with the knife. Arsenious acid removes the tumors quite as completely and effectually and with much less subsequent disfigurement. The chances of recurrence are great reduced, for there is always hesitation with the use of the knife in going sufficiently wide of the apparently abnormal tissue to remove outlying cancer-cells.

Roentgen Rays.—Dr. Malcolm Morris, of London, the distinguished dermatologist, when on a visit to this country a few weeks ago, said to Dr. Robinson that for deep tumors of the upper part of the face the Roentgen rays are an effective remedy. Dr. Morris is a thoroughly conservative observer, and so it would seem that for the hopeless malignant tumors, beyond our skill heretofore, this new remedy provides a very promising method of treatment.

To be continued.

BOOKS RECEIVED.

DOSE-BOOK AND MANUAL OF PRESCRIPTION WRITING. By Dr. E. Q. Thornton. 8vo, 362 pages. Illustrated. W. B. Saunders & Company, Philadelphia and London.

A TREATISE ON MEDICAL JURISPRUDENCE. By Dr. G. V. Poore. 8vo, 550 pages. Longmans, Green & Co., New York.

CIRCUMSTANCE. By Dr. S. Weir Mitchell. The Century Co., New York.

A MANUAL OF MEDICINE. Edited by Dr. W. H. Allchin. Vol. III. The Macmillan Co., New York.